

Descriptive Catalogue

1893-1894

ICE TOOLS



Wm. T. Wood & Co.

SELENTON, TEXAS



Established in 1834.

WM. T. WOOD & Co.

MAKERS OF

ICE TOOLS

ARLINGTON, MASS.

Please destroy former
Catalogues.

Introduction.

During the past year we have doubled our capacity by extending our forge-shop, our machine-shop, and our warerooms, so that now we occupy upwards of thirty thousand square feet of floor surface at the home plant. Through our various **Agencies** and our home stock we hope to fill the largest orders immediately upon their receipt.

Wood's Eureka Elevator Planer has received unqualified praise, and has no equal. Read about it on pages 10, 11, and 12.

Wood's Perfection Cultivator, or Field Planer, now in use for several years, has revolutionized field planing. Independent levers (patented) give it distinctive superiority. (See page 13.)

Mr. Henry Bodenstein, who is now with us, invented both of the above most excellent machines.

Our Perfection Plows and Markers (page 16) should be carefully examined. We mean to keep their good features and working qualities beyond criticism.

Our Patent Extension Guide, for markers and plows, is made on thoroughly correct principles, and is therefore a great favorite. Read about it on pages 16 and 23.

Twin-Cut Plows (page 9) will interest small harvesters, and they are a great advance over cutting with a saw only.

Steel has taken the place of iron in the manufacture of chisels, tongs, and other articles requiring stiffness, and *progress* governs all our methods in getting up the artistic ice tool which is "just right" in weight and temper.

Our Prices are as low as first-class articles can be made. We pay for good stock and good men; and good men, personally supervised, do good work. Our manufactures have always been recognized as *standard goods*, and that reputation shall be preserved on the merits of what we offer you.

Complete stocks of our manufactures are carried in Boston, New York, Albany, Detroit, Saginaw, Chicago, St. Paul, Omaha, Denver, Kansas City, St. Louis, and Atlanta, for the convenience of our customers.

Cable address: "Woodice, Boston."

Telegraph code on pages 51-56.

WM. T. WOOD & Co.,

Arlington, Massachusetts.

October 1, 1903.

BOSTON WAREROOMS with Joseph Breck & Sons, dealers in Agricultural Implements and Seeds, 51 North Market Street.

Telephone connection with Arlington.

ICE TOOLS.

To the ice-harvester it is of the utmost importance that he possesses the most perfect working tools he can buy. None but the **very best** are economical to him. The cutting season is short, the weather is cold, the men are hurried, and an unnecessary delay on account of unmanageable or imperfect tools is both aggravating and expensive. Numbers of cases can be cited where users of cheap tools, bought because they were low in price, have lost many times the cost of good ones by delays, breakages, and poor service.

Our aim in manufacturing is—

1st. To make the best in the market.

2d. To sell at the lowest price that the best can be sold.

We mention the following advantages in favor of carrying out this aim :

We are the oldest ice tool manufacturers in the United States, and consequently have the longest experience.

We have the largest and most extended trade in ice tools of any manufacturers, and are therefore subject to a greater scope of suggestions.

We manufacture ice tools only, giving our entire time and energies to the perfecting of them alone.

We have unequalled facilities for manufacturing, by means of which we can execute work rapidly and in a superior manner.

We employ the most skilful workmen, many of whom have been with us for long periods of years.

Our goods are manufactured under our direct supervision, and some of the most particular branches are executed by ourselves personally, thus enabling us the more confidently to guarantee satisfaction.

We have the best of opportunities for making practical tests of our work, being located in the midst of extensive ice-cutting companies.

We buy no inferior materials, using only that quality which, by experience, we know will make the best article.

We purchase in large quantities, at the lowest market rates for cash, and can sell at the lowest prices consistent with our quality of work.

We carry an extensive stock of manufactured goods, and can fill large orders promptly.

In view of the above, we feel confident of being able to give complete satisfaction to all; and we hope to place in the hands of every dealer a sample, at least, of our goods.

WM. T. WOOD & CO.

ARLINGTON, MASS.

REPAIRING.

We repair all kinds of ICE TOOLS, whether of our own make or others', promptly, well, and at lowest prices. It pays the user to get his repairing done at our factory, instead of allowing the local blacksmith to do it.

An estimate will be given before undertaking the work, when desired.

SEND REPAIRS EARLY

and avoid freight delays and the Fall rush of work at factory.

✉ Ship by some through line, if possible; be sure that your name as shipper is on the tag, and notify us when you ship.

We will furnish tags if you will send for them.


Markers that have become worn too shallow for profitable use can be made as good as new by the insertion of new teeth. The cost is about \$25.00. *Always send the guide, that it may be fitted accurately.*

New sets of teeth in plows which are worn too shallow to pay for re-forging, will make them equal to new ones. Prices will be sent on application, and on receipt of description of the plows. Plows needing new teeth must be sent to the factory, as we cannot send sets of teeth drilled, ready for insertion.

Re-forging. This process restores the teeth to their *proper gauge*, or width of cut. (See page 8, paragraph "The Standard Scale.") It also re-temperes and re-finishes the teeth, and makes the plow or marker good for many years. Re-forging makes a steel plow as good as when new, excepting in depth, and, including painting, usually costs about \$7.00.

Gumming out, a job which saves the user much filing on the bottoms of the teeth when sharpening markers or plows, costs about \$3.00.

Broken teeth in markers or plows can be replaced with new ones. It is always much better in such cases to send the machine to our factory, if possible, as we can put in the new tooth or teeth solidly, and can leave the plow perfectly true, warranted to work. When this is not practicable, take out the broken parts of the tooth or teeth, and either express them to us, or mail us an *exact diagram* of the tooth *entire*,—including the bolt-holes,—made on *thick paper*, and we will return a tooth to fit.

(If paper pattern is sent, it is well to give the *width of cut*, by cutting a notch in a card,  which fits the point of the tooth).

After putting the new tooth in its place, see that the plow is straight, and that all the teeth are in true line.

Burned Plows or Markers can be made as good as when new by working over; and an expense of \$14.00 or \$15.00 will cause a pile of junk to be transformed into a serviceable and nicely painted ice plow, with new case.

Chisels and Bars which have become so worn up as to be of but little use, can be made as good as new by re-steeling or welding on new ends.

Ice Hooks can be overhauled, and, by supplying new pullers, shovers, or handles, as needed, can be made into good hooks at less than half the price of new ones.

WM. T. WOOD & CO.

Prompt attention paid to all repairs. Satisfaction guaranteed. Reminder: Do not delay sending tools for repairs early.

DIRECTIONS FOR FILING ICE PLOWS AND MARKERS.

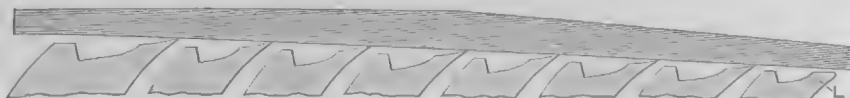


ILLUSTRATION NO. 1.

First. — File the points of the teeth so they will range level, using a long straight-edge for the purpose.

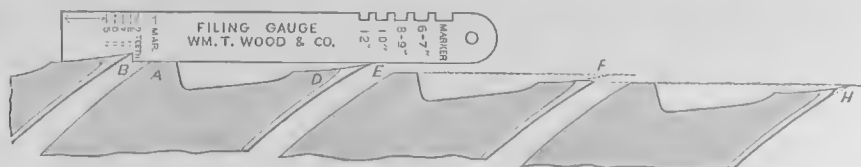


ILLUSTRATION NO. 2.

Second. — File the heel (A) of each tooth and also the bottom side of each point, so that both will conform to the filing gauge, as shown above.

Never file on the fronts of the teeth in the spaces between them (B), as the practice will produce points like H; and always avoid any tendency to **round** the bottoms of the points, as at F. The bottom side of each point must be slightly hollowed (as over D), and it will then fit the filing gauge (as over B).



ILLUSTRATION NO. 3.

Third. — File the **HIND HEEL** so that when the long straight-edge is held so as to bear on it and on the hind point, the front end of the straight-edge will be raised over the heel of the clearing tooth (the front heel of all) to the mark shown on filing gauge which is numbered to correspond with the number of **CUTTING TEETH** (not counting the clearing tooth) in the plow or marker that is being filed.

This mark represents the **total cut** of the plow; and even if the heels of the intermediate teeth are filed with more feed, so as to show a space between A and the filing gauge, the **hind heel** will regulate the total cut.

Use a draw rope six or eight feet long.

Keep the clearing tooth (L) **very blunt**, so as not to cut, and have its point filed $\frac{1}{8}$ inch lower than the long straight-edge.

A good ice plow, filed according to the above directions, cannot fail to cut.

The amount of feed above recommended is right for ordinary horses, under general conditions. All our plows will stand more feed if it is desired to put on more team.

To **increase the feed**, file the hind heel so as to show over the heel of the clearing tooth the cut desired (Illustration No. 3), and see that the feed of the other teeth is slightly increased, to correspond.

To **decrease the feed**, file a little off each point.

Never file the faces or fronts (H) of the teeth except to merely turn the fine feather-edge toward the ice.

If a plow with a good length of rope—seven or eight feet—does not “stay down” forward, and the teeth are sharp, file a little *extra feed* on the heels of the middle teeth, leaving the feed of the rear and front teeth regular; and this will cause the plow to hug down.

Send for combination filing gauge and standard scale of cutting widths.

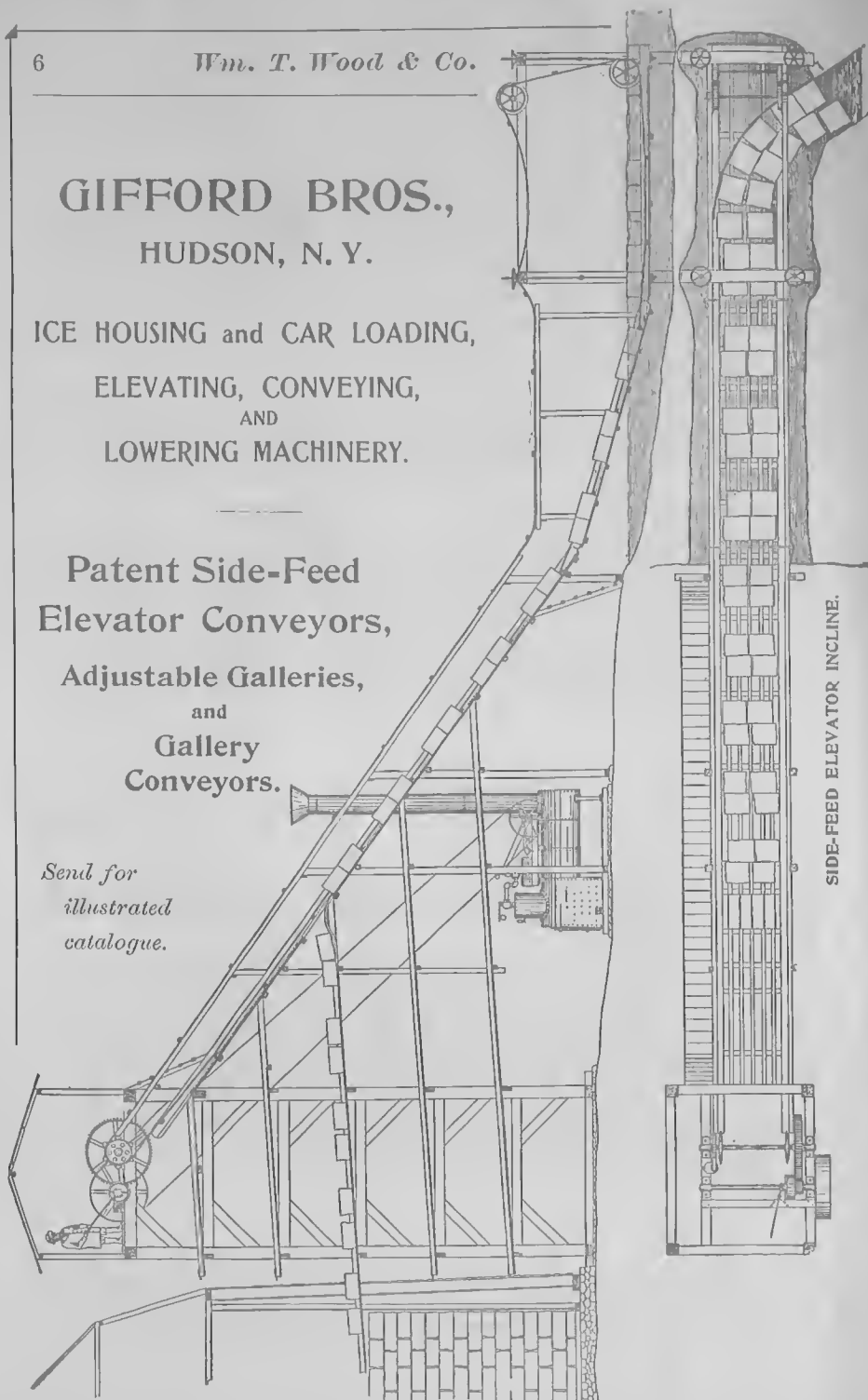
Remark. — By inverting this page, the parallel lines leading back from each point in Illustration No. 3 will show the cutting process of each successive tooth.

GIFFORD BROS., HUDSON, N. Y.

ICE HOUSING and CAR LOADING,
ELEVATING, CONVEYING,
AND
LOWERING MACHINERY.

Patent Side-Feed
Elevator Conveyors,
Adjustable Galleries,
and
Gallery
Conveyors.

*Send for
illustrated
catalogue.*



GIFFORD ELEVATORS AND CONVEYORS.

Rapid and economical handling of ice from water to house demands the *best* ice housing machinery, of sufficient capacity to carry all of the ice that can be fed to it and properly cared for in the rooms during a given time, and of such strength as to withstand the strain consequently placed upon it.

Machinery is a necessity, but the style best adapted for each location depends upon certain conditions.

The **Side-Feed Elevator Conveyor**, for houses of considerable capacity, represents the best and most economical method of harvesting ice, — carrying the blocks from the feeding point to the room doors, whatever the distance, by means of an endless chain and without the use of gravity runs.

Gallery Conveyors, consisting of a single strand of endless chain on adjustable galleries, will also deliver ice from the elevator tower to the room doors without concussion and consequent breakage.

Adjustable Galleries are used to replace stationary runways, and can be so regulated in pitch as to deliver the ice on a "soft" day as well as on a cold, frosty morning, and without the use of extra manual labor or scratchers.

Incline Elevators — side-feed, undershot, or overshot, — operate endless chains, with oak hold-bars six feet apart, and are run at the rate of from twenty to thirty hold-bars per minute, the speed depending upon the style of the elevator.

**Perpendicular Elevators,
Endless Chain, Automatic Air Pressure, and Gig
Lowering Machines,
Combined Elevating and Lowering Machines,
Car Loading and Chip Conveyors,**

as well as other ice-handling machinery, are illustrated and described in catalogue, copy of which will be mailed if requested.

Drawings showing construction of woodwork and manner of placing machinery will be furnished free of cost upon receipt of order.

GIFFORD BROS.,

HUDSON, N. Y.

MARKERS AND PLOWS.

In the manufacture of these highly important implements we incorporate the results of an extended and critical experience, and we claim a ripened judgment in applying certain necessary nice points of detail to their manufacture which enable us to produce as perfect markers and plows as can be made.

The **teeth** are made of *best quality tool steel* only; have a correct curve to insure ease of cutting; are tempered for hard service; are smoothly finished; and are completed with a **patent clearing tooth** in every plow.

The **standard scale** of gradation, or widths of cutting points, is the same that has applied to the thousands of ice-plows put out by us during the many years of our manufacturing life, and provides for a decrease in width of bit of $\frac{2}{1000}$, or $\frac{1}{40}$ inch for each two inches increase in depth of plow, thus:—

Markers $\frac{44}{1000}$, or full $\frac{7}{16}$ in.; 6-in. and 7-in. plows $\frac{41}{1000}$, or full $\frac{3}{8}$ in.; 8-in. and 9-in. plows $\frac{39}{1000}$, or strong $\frac{3}{8}$ in.; 10-in. plows $\frac{36}{1000}$, or scant $\frac{3}{8}$ in.; 12-in. plows $\frac{31}{1000}$, or scant $\frac{1}{2}$ in.; 14-in. and 16-in. plows $\frac{21}{1000}$, or full $\frac{5}{16}$ in.

Send for our combination filing gauge showing this scale.

The **patent clearing tooth** (described on page 21) is applied to all our plows.

The **beams**, or backs, are stiff and substantial, solidly bolted, and have high, raised head-pieces on all plows excepting the deep ones.

Large chip spaces are cut in the beams, enabling every plow to cut its *full depth*.

The **handle connections** are of forged steel; not malleable iron, as most makers use.

Our **guide work** is of the most substantial order. The guide plates are steel and very stiff; the guide bars are made with a forged T at the bolted end, and a solid collar at the plate end; the collar and the large nut which holds the plate on are both lathe-turned to make a solid bearing; the guide brace is double bolted; and the guide bolts will not turn when taking off the nuts.

This thoroughness will be appreciated by the experienced ice-groover.

The **proportion** and finish of our markers and plows combine strength with beauty, and secure the easiest possible working qualities.

A **substantial case**, well ironed, painted, and strapped, protects the teeth from injury, and greatly aids in moving the machines over the ice-field.

On the use of ice plows, see page 21.

FOR SMALL ICE-HARVESTERS.



WOOD'S TWIN-CUT PLOW.

(Illustrating the 10-inch 8-tooth plow in operation.)

STEEL FRAME, WELL BRACED.

TEETH OF SPECIAL STEEL.

Weights: 8 in., 4 teeth, 125 lbs.; 9 in., 6 teeth, 150 lbs.; 10 in., 8 teeth, 175 lbs.

The Twin-Cut Plow enables a person to cut ice *twenty times as fast* as can be done with the saw alone, and has become very popular with those who do not feel able to buy the regular style of ice plow.

It will pay for itself in one season, for by its use the work of laborious hand-sawing is almost wholly avoided.

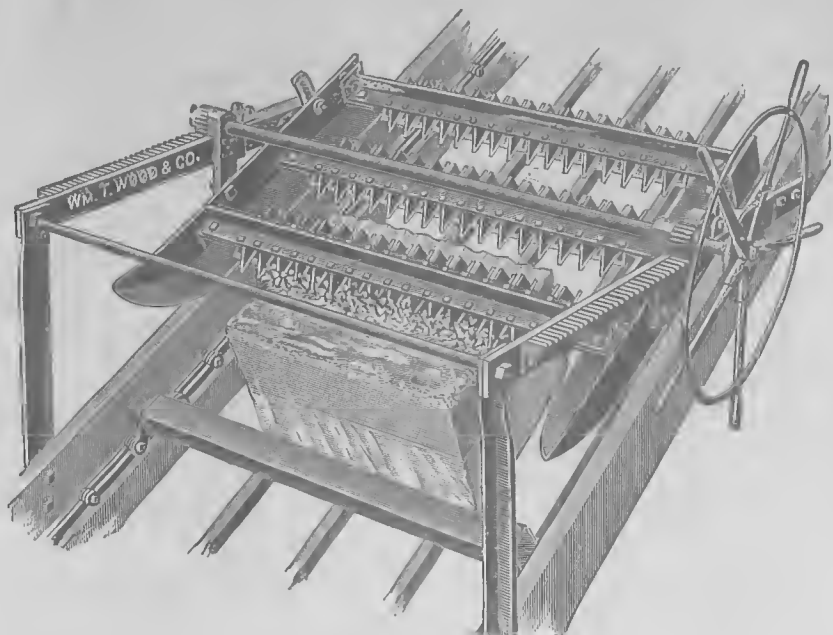
The Twin-Cut Plow is so simple in principle that it is sure to be kept in order, and the advantage of being able to ride it obviates the necessity of keeping the edges so keenly sharp as is required in the regular ice-men's plows.

- | | |
|---------------------------------------------------------------------------------------|---------------|
| No. AA.—WOOD'S TWIN-CUT PLOWS, 8 inch, 4 teeth
(two cutters each side) | each, \$20.00 |
| No. AB.—WOOD'S TWIN-CUT PLOWS, 9 inch, 6 teeth
(three cutters each side) | " 24.00 |
| No. AC.—WOOD'S TWIN-CUT PLOWS, 10 inch, 8 teeth
(four cutters each side) | " 28.00 |
| No. AT.—EXTRA TEETH, 8 inch, 9 inch, or 10 inch | " 1.00 |

All of above cut cakes 14, 16, 18, 20, 22, 24, 26, 28, 30, or 32 inches wide by adjusting the width of frame.

Send for complete illustrated circular, showing sizes and describing use.

WOOD'S EUREKA ELEVATOR PLANER.



Patented March 26, 1901.

MADE WITH ONE, TWO, THREE, FOUR, FIVE, OR SIX KNIFE BARS.

Our Greatest Modern Success!

The horizontal rack is the distinguishing feature of this planer.

The frame is rigid and strong, and cannot spring.

The carriage is moved with *rapidity and ease*, as the *weight does not have to be lifted*.

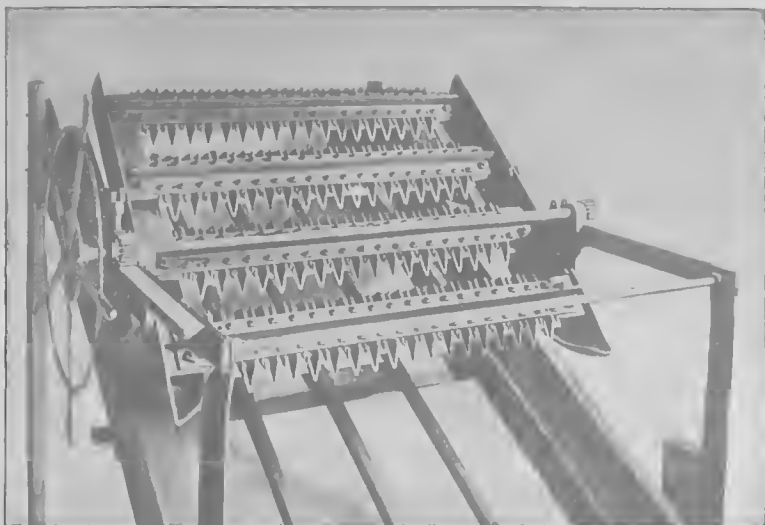
The knives never "lift," as the pressure of the ice is in the direction of holding them down.

The stops can be quickly changed to suit any desired regular thickness.

The ice is left of even thickness and is well corrugated, and the carriage can be held at any point if varying thicknesses are preferred.

One-knife and two-knife planers can be increased by customer to two-knife or three-knife planers by ordering additional knife bars, as the framework is the same for sizes 01, 02, and 03.

Further described and priced on page 12.

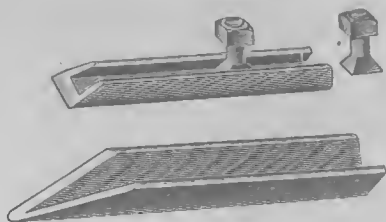


(Knives described on page 12.)

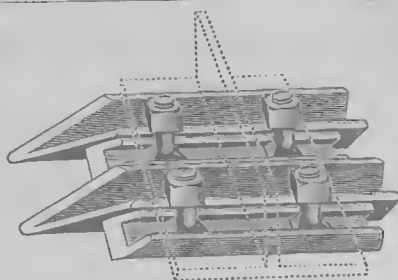
We made several of the four-knife planers last year as well as a large number of smaller ones, and one of our four-knife customers ordered a six-knife planer of the same type for this year.



The above six-knife planer was made for a Maine firm who wished to reduce ice that was from twenty to thirty inches thick to an even thickness. It was an unqualified success.



Detail of FLUTED KNIFE (lower cut),
and WEDGE KNIFE (upper cut with bolts).



Detail of
WOOD'S EUREKA CUTTER BAR.

WOOD'S EUREKA CUTTER BAR, WITH CONTINUOUS CUTTING EDGE.

All good harvesters corrugate their ice nowadays, and take off the soft and impure surface.

Advertise to your customers that you plane off the impure portion of your ice, either on the field (see page 13) or on the incline, and you will influence the choicest and best-paying trade of your city.

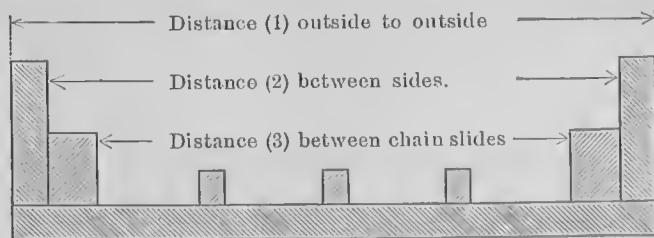
The Wood's Eureka Cutter Bar makes an absolutely first-class knife. The teeth are all made from *best quality tool steel*, and are finely tempered.

The **fluted teeth** are much more quickly ground than solid teeth can be. The points are rounded just enough to be very strong and to make a groove that will not encourage a split in the cake.

Each **tooth is independent**, and can be removed in an instant, as the bolts need only to be loosened.

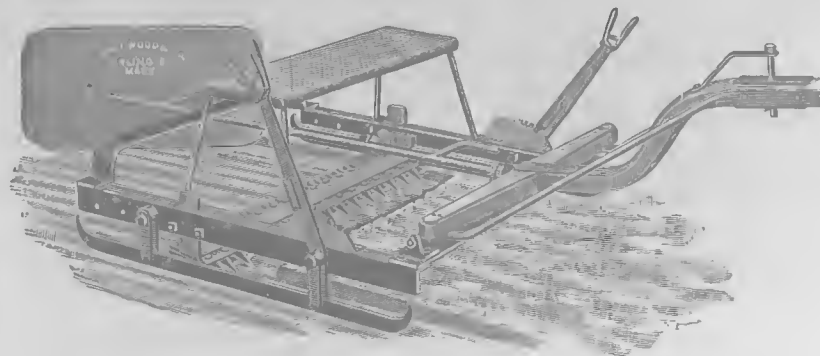
No. 01.—	EUREKA ELEVATOR PLANERS,	with 1 knife,	each,	\$125.00
No. 02.—	"	"	"	"
No. 03.—	"	"	"	"
No. 04.—	"	"	"	"
No. 05.—	"	"	"	"
No. 06.—	"	"	"	"
No. 08.—	EXTRA EUREKA FLUTED TEETH	"	.50
No. 09.—	"	"	WEDGE	"
				.50

In ordering, state whether your incline is an elevator conveyor or a fixed run. If the latter, please give the *pitch*,—the number of inches it rises in a horizontal foot. Also, in all cases we want your measurements, accurately



taken, of the distances indicated on the diagram, particularly (1) and (2).

In ordering by telegraph, use code (see page 51), and add the distances (1) and (2) and the pitch.



WOOD'S PERFECTION ICE CULTIVATOR.

FITTED WITH WOOD'S EUREKA CUTTER BAR.

Weight, with one knife, 320 lbs.

Invaluable for removing bunches of sap-ice.

Independent levers make this cultivator excel all others.

It will cut its full width of forty inches. No grooving by the marker is required.

The laps are perfect.

The depth of cut is regulated at will, grading from nothing to the deepest cut.

A pair of good horses will plane off, at a single trip, from two to three inches in depth, forty inches wide.

It is often necessary to shave off snow-ice from the ice field in order to encourage more rapid freezing of salable ice, even if elevator planes are used at the time of harvesting.

The great advantage of the cultivator over the No. 24 plane is that *no grooving by the marker* is required before operating it. It is provided with runners which are raised by the operator at will, so that one will rest on the uncut surface, allowing the knife to cut to such depth as is desired, while the other runner is dropped to the level of the knife and rests on the planed portion, thus making a perfect joint with the previous cutting.

For cutting off drifted bunches of sap-ice, this cultivator is invaluable. The levers can be manipulated at will when in use, and the chip can be graded from nothing to the deepest cut.

A substantial iron reversible track-clearer leaves a good path to travel in for the horse which follows in the planed part.

A pole is necessary in order to keep the cultivator from swerving from its true course.

No. Y1. — WOOD'S PERFECTION ICE CULTIVATORS, with one 40-inch corrugating Eureka knife, and pole . . . each, \$85.00

No. Y2. — WOOD'S PERFECTION ICE CULTIVATORS, with two 40-inch corrugating Eureka knives, and pole . . . " 110.00

No. YB. — EXTRA 40-IN. EUREKA CUTTER BARS, complete, " 25.00

No. 08. — EXTRA EUREKA FLUTED TEETH . . . " .50

No. 09. — " " WEDGE " . . . " .50

DAIRYMEN'S ICE PLOWS.**No. A. 7 INCH, 5 TOOTH "ICE KING,"**

WITH NON-ADJUSTABLE SWING GUIDE AND PATENT CLEARING TOOTH.

Weight, with case, 115 lbs.

The "Ice King" Plows — Nos. A, C, D, E, F, and G — are not intended for those who harvest ice as a business, being designed expressly for

**DAIRYMEN, CREAMERIES, BUTCHERS, COUNTRY GENTLEMEN,
AND FARMERS.**

The "Ice King" is made after the plan of the higher priced and finer grade ice-men's plows, and was introduced by us a few years ago in response to an urgent demand for some implement decidedly superior to various types of cheap ice plows on the market.

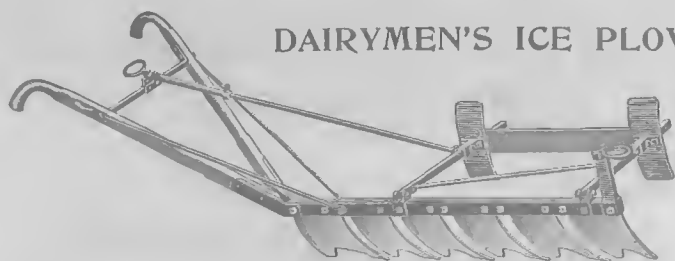
Its sales have been large, for it is capable of very severe work under all conditions of weather, and those who cut small quantities of ice do not always feel like investing the value of the high grade plows.

It is not to be expected that the "Ice King," at nearly one-half the cost, can equal the best quality tool-steel plows for service, but we guarantee them superior to other plows of similar grade.

The solid steel teeth are not polished, as in the ice-men's plows, but are left blue. The guide is substantially made and is stiff and strong, and the plow has only to be kept properly sharpened to cut rapidly and well.

Single-row plows have advantages over double-row ones; and when grooves, made the day before, become partially frozen during the night and it becomes necessary to reopen them, the "Ice King" can be conveniently handled to do this difficult work.

We fully warrant the "Ice King" Plows in every way.



DAIRYMEN'S ICE PLOWS.

NO. E. 7 INCH, 5 TOOTH "ICE KING," WITH

PATENT ADJUSTABLE SWING GUIDE AND PATENT CLEARING TOOTH.

Our new Patent Adjustable Swing Guide for the "Ice King" is a perfect arrangement for those who need to cut more than one size of cakes.

The stock sizes are drilled to mark ice 14, 16, 18, 20, and 22 inches. Other sizes made to order.

For customers who always cut the same sized square cake, we recommend the Nos. A, C, or D styles, as a non-adjustable guide is naturally firmer.

Swing guides on plows must only be used for marking out the field of ice, and the plow must not run twice in the same groove with the guide on.

Mark out the field as described on page 18, and remove the guide when plowing down.

We file the "Ice King" with a feed to cut $1\frac{1}{2}$ inch at a draft for a light horse, but it can be filed in a few moments to feed more for a heavier horse.

A horse in four runs, at a pace of three miles an hour, would cut the equivalent of a groove 6 inches deep and 66 feet long in one minute, thus equaling the sawing capacity of fifty men in 12-inch ice for the same time.

The "Ice King" will therefore save its cost in a short time.

No. A. — 7-inch "ICE KINGS," 5 cutting teeth and clearing tooth, with 22-in. swing guide	each, \$28.50
No. C. — 10-inch "ICE KINGS," 5 cutting teeth and clearing tooth, with 22-in. swing guide	" 33.50
No. D. — 12-inch "ICE KINGS," 5 cutting teeth and clearing tooth, with 22-in. swing guide	" 38.00
No. E. — 7-inch "ICE KINGS," 5 cutting teeth and clearing tooth, with 14 to 22 in. patent adjustable swing guide,	" 30.00
No. F. — 10-inch "ICE KINGS," 5 cutting teeth and clearing tooth, with 14 to 22 in. patent adjustable swing guide,	" 35.00
No. G. — 12-inch "ICE KINGS," 5 cutting teeth and clearing tooth, with patent adjustable swing guide (<i>made to order only</i>)	" 40.00
Nos. A, C, and D, without guide, <i>deduct from above prices,</i>	" 5.00

All our "Ice Kings" are provided with a wooden shoe to protect the teeth.

Directions for Sharpening Plows on page 5.

PATENT PERFECTION ICE PLOWS AND MARKERS.



PATENT PERFECTION MARKER, WITH 22 x 32 INCH PATENT EXTENSION GUIDE.

Patent Inserted Teeth; Patent Ball-Bearing Fastening.

Always the same depth as when new. Teeth quickly replaced when damaged by stones.

Feed instantly altered by adjusting depth-gauge to suit condition of ice.

Alignment of points always kept perfect.

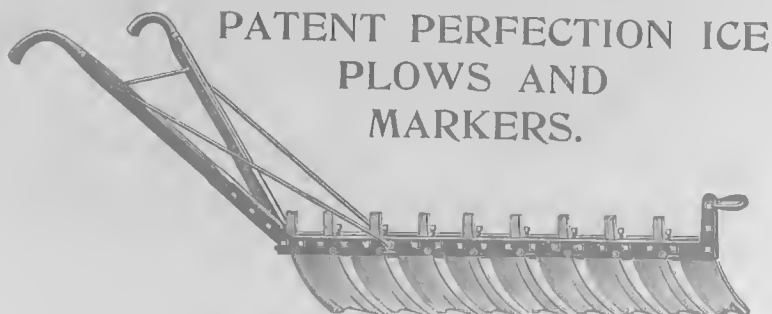
No. H.—	3½-inch PATENT PERFECTION MARKERS, 11 cutting teeth, with 22-in. swing guide	each, \$70.00
No. K.—	3½-inch PATENT PERFECTION MARKERS, 11 cutting teeth, with 22 x 32 in. patent extension guide, “	73.00
No. M.—	EXTRA 22 x 32 in. PATENT EXTENSION GUIDES, for markers (connections being on marker) . . . “	10.50
No. N.—	PATENT EXTENSION GUIDES, for markers or plows, with connections complete “	12.50
No. HT.—	EXTRA PERFECTION TEETH, for markers . . . “	2.00

The Modern Perfection Marker, illustrated above, with *eleven cutting teeth* and adjustable depth-gauge, is an ideal machine, and is of recent invention. *Plows* with inserted teeth have been in use for many years. **The New Patent Extension Guide** which we offer is made upon strictly scientific principles, and is the strongest one when extended that has ever been put out. (See further description on page 23.)

In cutting 22 x 32 in. cakes, the extension guide is much more convenient than to have two guides, unless the latter are to be permanently attached to two separate markers.

All up-to-date ice harvesters will want their new markers to be of the Perfection style.

(General remarks on the use of markers on page 18.)



8-INCH PAT. PERFECTION PLOW, - 8 TEETH, - PAT. HIND HEEL.

Pat. Inserted Teeth; Pat. Inserted Hind Heel; Pat. Ball-Bearing Fastening.

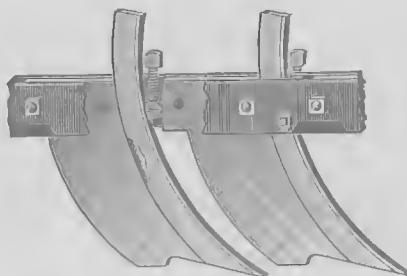
Always the same depth as when new. Teeth quickly replaced when damaged by stones.

Feed instantly altered by adjusting hind heel to suit condition of ice.

Alignment of points always kept perfect.

No. P.	— 8-in. PAT. PERFECTION PLOWS, 8 cutting teeth, each,	\$60.00
No. Q.	— 10-in. " " " 6 " " "	61.00
No. R.	— 12-in. " " " 5 " " "	62.00
No. PG.	— 8-in. No. P PLOWS, 8 t., with 22 x 32 in. Pat. Exten. Gd.,	72.00
No. QG.	— 10-in. " Q " 6 t., " " " " " " "	73.00
No. RG.	— 12-in. " R " 5 t., " " " " " " "	74.00
No. PT.	— EXTRA PERFECTION TEETH, for 8-in. plows,	2.75
No. QT.	— " " " " 10-in. " " "	3.25
No. RT.	— " " " " 12-in. " " "	3.75

Inserted tooth ice plows have been in use for many years in certain parts of the country, and are in no sense an experiment. As they do not reduce in depth by wear, and as a bruised point can easily be sharpened and then be quickly set to its proper level, they have steadily grown in favor, being more economical in a series of years for large harvesters, and more convenient in case of damage for smaller ice-gatherers.



Detail of Teeth, with ball-bearing fastening.

The inserted teeth used in our Perfection plows and markers are fitted so nicely, and the patent ball-bearing fastening is so positive in its binding power, that the teeth are as firm as if they were solid. Duplicate teeth always on hand.

The patent hind heel is a very important feature of these plows, as the feed of the plow can be instantly changed, without filing, by means of one set-screw.

(Set the hind heel in accordance with the idea illustrated by the third engraving on page 9, and the plow will cut just what you want.)

We are convinced, from our observation of this style of ice plow, and from the many testimonials we have received, that the "Perfection" implements we are now making, notwithstanding their somewhat higher cost, will steadily grow in favor with progressive ice-men.

**MARKER, WITH SWING GUIDE.**

Weight, complete, with case, 145 lbs.

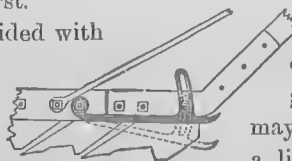
- No. 1. — 4-inch CAST STEEL MARKERS, 11 cutting teeth,
with 22-in. swing guide, complete each, \$58.00
- No. 1½. — 4-inch CAST STEEL MARKERS, 11 cutting teeth,
with 22 in. and 32 in. swing guides “ 66.00
- No. 1¾. — 4-inch CAST STEEL MARKERS, 11 cutting teeth,
with patent extension swing guide, 22 x 32 in. “ 61.00

This style of marker is the one almost universally used, on account of its simple construction and reasonable price.

Markers are used to mark out the field of ice into squares preparatory to grooving with the plows.

Having made a straight line, $\frac{1}{2}$ inch deep, with a hand plow (or a line marker), using a straight edge, the marker teeth should be run in this line across the field, in this manner marking the first groove. The guide is then swung over the back of the marker, and, returning, follows in the groove cut, thus regulating the distance for the teeth to cut a second groove, parallel to the first.

Every marker is provided with gauge, which is a great ing the depths of the the condition of the ice it is desired to plane off the use of the old-style plane shown on page 24.



an adjustable depth-convenience in regulat-grooves, as changes in may require, and in case a light surface of ice by

Swing guides in stock are 22 inches; other sizes made to order promptly. When *additional* guides are wanted, the prices for the extra guides are as follows:—

EXTRA GUIDES, 16 in. wide to 28 in. wide (not adjustable), each,	\$7.50
“ “ 30 “ 36 “ “ “ “ “	8.00
“ “ 40 “ 44 “ with solid forged	
double-brace (not adjustable)	“ 10.00
EXTENSION SWING GUIDES, for markers, extra above price	
of regular guides	“ 3.00

The prices given for extra guides do not embrace guide connections, as the set attached to the marker for its regular guide is sufficient for additional guides.



6-INCH PLOW. 9 TEETH.

Weight, with case, 115 lbs.

No. 2.—6-inch CAST STEEL PLOWS, 9 cutting teeth . . each, \$48.00



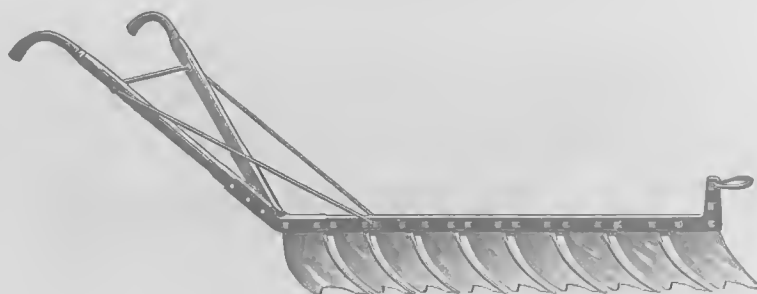
7-INCH PLOW. 7 TEETH.

Weight, with case, 105 lbs.

No. 3.—6-inch CAST STEEL PLOWS, 7 cutting teeth . . each, \$42.00

Weight, with case, 100 lbs.

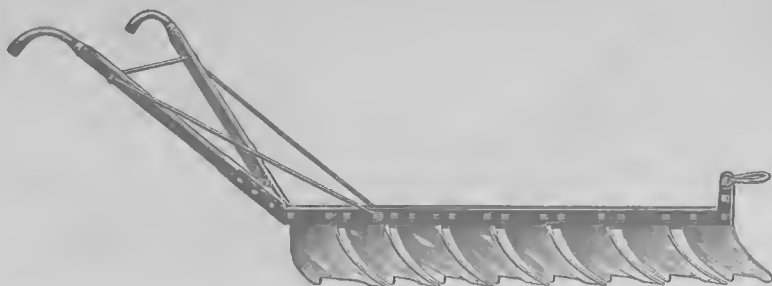
No. 4.—7-inch “ “ “ 7 “ “ . . “ 44.00



8-INCH PLOW. 8 TEETH.

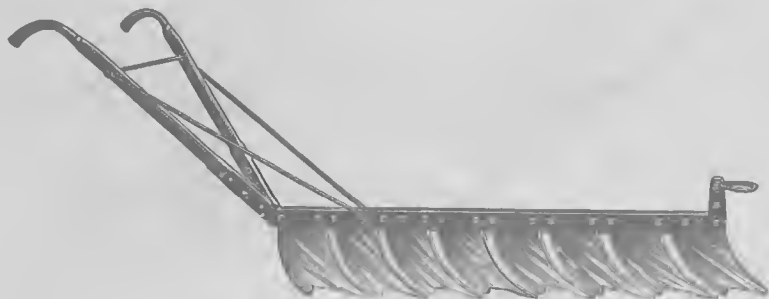
Weight, with case, 115 lbs.

No. 5.—8-inch CAST STEEL PLOWS, 8 cutting teeth . . each, \$50.00

**8-INCH PLOW. 7 TEETH.**

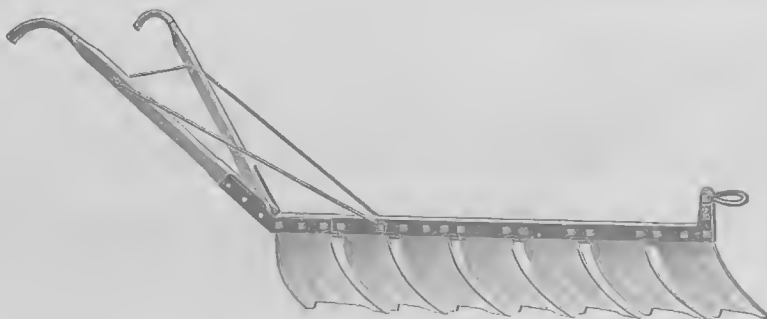
Weight, with case, 115 lbs.

No. 6.—8-inch CAST STEEL PLOWS, 7 cutting teeth . . . each, \$48.00

**9-INCH PLOW. 7 TEETH.**

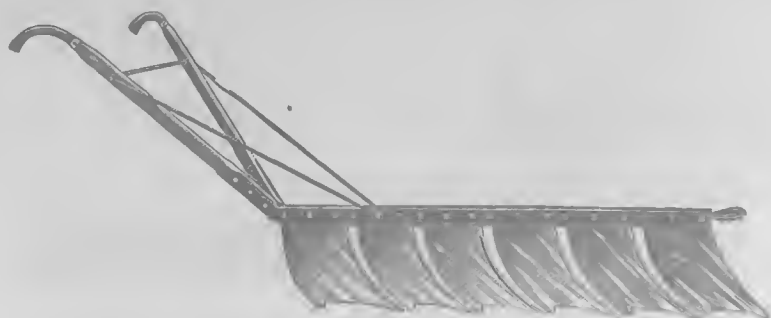
Weight, with case, 120 lbs.

No. 7.—9-inch CAST STEEL PLOWS, 7 cutting teeth . . . each, \$51.00

**10-INCH PLOW. 6 TEETH.**

Weight, with case, 125 lbs.

No. 8.—10-inch CAST STEEL PLOWS, 6 cutting teeth . . . each, \$53.00



12-INCH PLOW. 5 TEETH.

Weight, with case, 135 lbs.

No. 9.	— 12-inch	CAST STEEL	PLOWS,	5 cutting	teeth,	each,	\$58.00
" 10.	— 14-inch	"	"	5	"	"	65.00
" 10½.	— 16-inch	"	"	5	"	"	70.00

The use of the ice plow is to groove to the depth required, by following in the grooves made by the marker. A plow should cut, if properly sharpened, $\frac{1}{4}$ inch, or a little over, to each tooth; so that a 7-toothed plow, for instance, will cut 2 inches at a draft, a 12-inch plow $1\frac{1}{2}$ inches. Markers, with their 11 teeth, will cut $2\frac{3}{4}$ to 3 inches with the same power. The advantage, therefore, is always in using as shallow plows as will answer, as they are stiffer, and will cut faster.

Ice will break without difficulty if grooved to one-half its thickness; but it is much better for the harvester to groove at least two-thirds through, if he is particular about having the cakes split true, without "lips." The head-lines, grooved for detaching floats, are usually made deeper than other grooves. (See pages 7 and 8 in Ice-Harvesting pamphlet, which we mail upon application.)

The plow, in ordinary cutting, never has to be lifted out of a groove. It runs out naturally at the ends of the grooves, and is then easily swung around by balancing it on the hind heel.

The patent clearing tooth, which is applied to all our plows, is a non-cutting tooth which takes the place of the old-fashioned blank. Being in front of the cutting teeth, and having a curved, flanged face, it neatly clears the grooves of chips which may have fallen in, and leaves the cutting teeth free to do their full work. *The point should be kept blunt.*

Our plows are so constructed that they will groove to their full depth. This should be taken into account when ordering.

Deep plows cut narrower grooves than shallow ones; therefore, never run a shallow plow in the groove made by a deep one. (See page 8.)

A full set of machines for large operations consists of a marker, and 6-in., 8-in., 10-in., and 12-in. plows, engaging five horses at once. This list can be reduced to any extent consistent with the needs of the harvester, or even to a single swing guide plow, if desired.

NOTE. — Plow ropes should be at least 8 feet long.



SWING GUIDE PLOW.

No. 11.—6-inch CAST STEEL PLOWS, 7 cutting teeth, with swing guide attached; (weight, with case, 135 lbs.) . . .	each, \$50.50
No. 12.—7-inch CAST STEEL PLOWS, 7 cutting teeth, with swing guide attached; (weight, with case, 140 lbs.) . . .	" 52.50
No. 13.—8-inch CAST STEEL PLOWS, 7 cutting teeth, with swing guide; (weight, with case, 150 lbs.) . . .	" 56.50
No. 14.—9-inch CAST STEEL PLOWS, 7 cutting teeth, with swing guide attached; (weight, with case, 155 lbs.) . . .	" 59.50
No. 15.—10-inch CAST STEEL PLOWS, 6 cutting teeth, with swing guide attached; (weight, with case, 160 lbs.) . . .	" 61.50
No. 16.—12-inch CAST STEEL PLOWS, 5 cutting teeth, with swing guide attached; (weight, with case, 170 lbs.) . . .	" 66.50

When two guides for one plow are wanted, in order that two-sized cakes may be cut, the prices for the *additional* guides will be as follows:—

EXTRA GUIDES.—16 inches wide to 28 inches wide . . .	each, \$7.50
" " 30 " " to 36 " " . . .	" 8.00

It is not practicable to use guides on plows wider than 36 inches.

CONNECTIONS FOR GUIDES, including cross-bar . . . per set, \$2.00

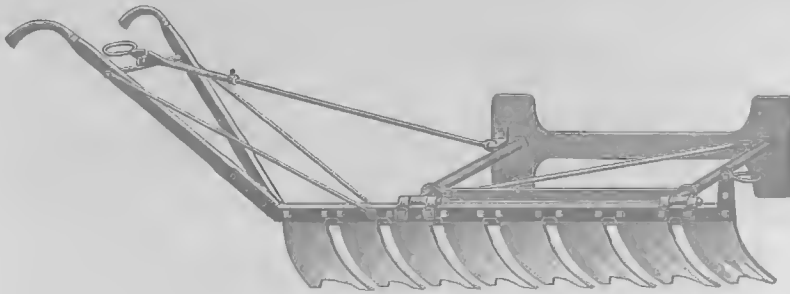
These are only needed when it is required to attach a swing guide to a plow which was made without guide. They consist of four croctehed hinges, a notched cross-bar to go between the plow-handles in which to lock the guide-handle, four bolts for the hinges and two bolts for attaching the swing guide to the hinges.

Extra guides need no connections, as the set provided with the first guide make additional guides complete.

A plow with swing guide attached is a device for combining a swing guide marker and plow. For dealers who put up small quantities of ice, it is a convenient and less expensive arrangement.

Mark out the field of ice in the same manner as with the marker (page 18). As soon as the *marking* is done, remove the guide, and plow down to the required depth.

NOTE.—Remarks on plows with guides on following page.



PATENT EXTENSION SWING GUIDE.

No. 17½. — PATENT EXTENSION SWING GUIDES for plows,
extra price over regular guides (see page 22) . . each, \$3.00

In extending this guide, the strong, braced parts are bodily moved, and it is therefore the strongest construction that can be employed. The guide handle is also adjustable, so that the plow can always stand plumb, and the greatest ease of throwing the guide is thus acquired. In ordering, please mention widths desired.

No. 18. — ADJUSTABLE STIFF GUIDES for plows (made to order), each, \$7.50

No. 19. — STATIONARY GUIDES for plows 5.50

These guides, not being reversible, oblige the operator to cross the ends of his ice-field instead of returning by the groove last cut.

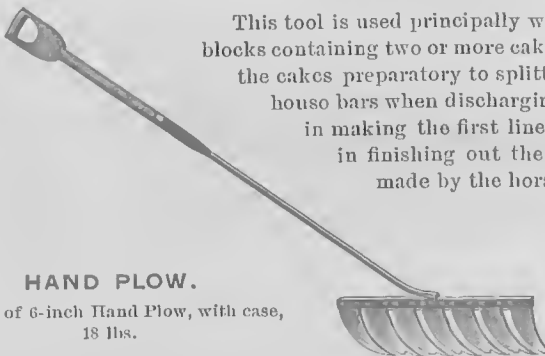
Plows with guides must not be expected to equal the marker in results. The marker cuts deeper at a draft, and, being shallow and more rigid, is capable of doing straighter work than a plow with guide. When the capital of the purchaser will allow, therefore, we recommend the use of the marker and one or more plows, and the full benefit of the gradation in cutting-width is then obtained. (See page 8, second paragraph.)

We guarantee our guide-plows to be as perfect as can be manufactured.

No. 20. — 6-inch MAN PLOWS, 7 cutting teeth, with 22-in.

swing guide, complete (weight, 100 lbs.) each, \$40.00

This is a light, first-class plow, made for harvesting thin ice.



This tool is used principally where ice is housed in blocks containing two or more cakes, to groove between the cakes preparatory to splitting them apart with house bars when discharging. It is useful, also, in making the first line on the ice-field, and in finishing out the ends of the grooves made by the horse plows.

The usual size is 6 inches.

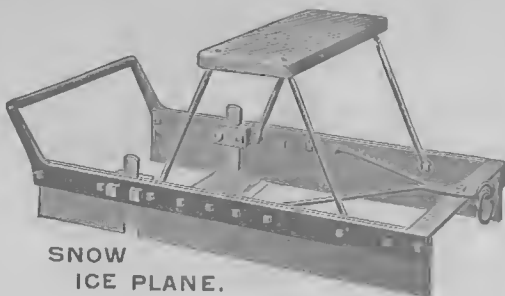
A painted case is strapped on every plow to protect the teeth.

HAND PLOW.

Weight of 6-inch Hand Plow, with case,
18 lbs.

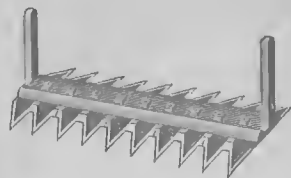
No. 21. — CAST STEEL HAND PLOWS, 6-inch each, \$15.00

No. 22. — " " " " 7-inch " 16.00



**SNOW
ICE PLANE.**

Weight, with one knife, 135 lbs.
Weight of extra knife and case, 17 lbs.



**PATENT
CORRUGATING KNIFE.**

Weight, boxed, 40 lbs.

- No. 24. — SNOW ICE PLANES, with one knife each, \$38.00
 No. 25. — EXTRA KNIVES, for planes " 10.00
 No. 25½. — PATENT CORRUGATING KNIVES, for planes " 25.00
 No. 26. — ADJUST. DEPTH-GAUGES, for markers, with bolts, " 1.00

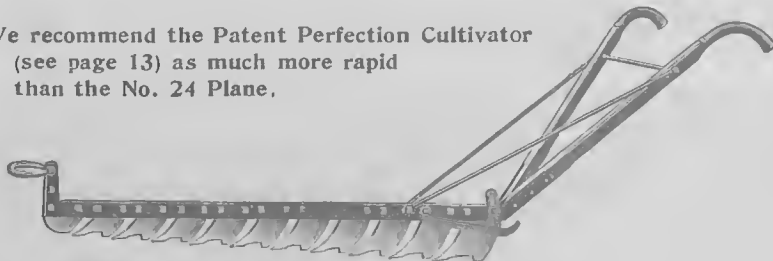
Mark out the field of ice with the marker the same as for grooving, excepting the cross-lines.

Set the *adjustable depth-gauge* of the marker so that the latter will groove the exact depth desired to plane off. Set the *knife of the plane* even with the bottom of the sides of the plane. The knife will thus cut out the marker grooves completely, and will leave the surface as smooth as new ice. It is advisable to have the marking out an inch or so narrower than the plane, to prevent any possible hindering.

Patent corrugating knives require much less power than the straight knives, and will also succeed in gritty ice when it is impossible to keep straight knives sharp enough to do the work.

Our adjustable depth-gauge, which we apply to all new markers, can be attached to any of our markers of former make.

We recommend the Patent Perfection Cultivator
 (see page 13) as much more rapid
 than the No. 24 Plane.



GROOVE CLEARER. 10 TEETH.

Weight, with case, 115 lbs.

- No. 28. — 5-INCH, 10-TEETH GROOVE CLEARERS each, \$50.00

Provided with adjustable depth-gauge.

When grooves become partly frozen during the night so that ordinary plows cannot be run in them, this groove clearer will successfully free them to its full depth.

ICE CHISELS.

All our Chisels are made with steel handles and are very stiff.

The variety of ice chisels which we catalogue is intended to cover the needs of every branch of ice-harvesting, packing, and delivering, and to provide for the choice of all classes of customers, by presenting all the leading styles of chisels and bars that have found favor in different parts of the country.

Our wide experience has trained us to thoroughly appreciate the important features of each article, and to produce tools that will meet the demands of the most critical users.

We claim as distinctive points:—

A large amount of best quality tool steel.

A temper precisely adapted to the uses of each.

A correct shape and weight, which at once commend them to an experienced hand as capable of doing the most efficient service.



NO. 1 AND NO. 3 SPLITTING FORK.

No. 1. Weight, 17½ lbs.; length, 4 ft. 9 in.; tines (outside), 14 in. long.
 No. 3. " 15 " " 4 " 6 " " " 12 " "

No. 30. — No. 1 SPLITTING FORKS each, \$4.25
 No. 31½. — No. 3 " " " 4.00



NO. 2 AND NO. 4 SPLITTING FORK.

No. 2. Weight, 18 lbs.; length, 4 ft. 10½ in.; tines (outside), 14 in. long.
 No. 4. " 15½ " " 4 " 7½ " " " 12 " "

No. 31. — No. 2 SPLITTING FORKS each, \$4.50
 No. 31½. — No. 4 " " " 4.25

Our splitting forks are made with long steel tines, tapered so as to give great wedging power in the plow-grooves without "shelling" the ice. Their weight makes them particularly useful in breaking off floats or large sheets from the ice-field, and they cannot be excelled for splitting the floats into strips when the grooving is insufficiently deep or partially frozen.

Nos. 1 and 2 are most used, being designed particularly for use on heavy ice.

Nos. 3 and 4 are popular with those who do not cut the heaviest ice, and who need a lighter bar.

**LYNN SPLITTING BAR.**

Weight, 18½ lbs.; length, 5 ft.; tine, 18 in. long.

No. 32.—LYNN SPLITTING BARS, 1 tine, 3 in. wide . . . each, \$4.25

Made with a solid steel tine or blade.

This is preferred by some to the splitting fork for barring off, especially where the grooves have become frozen.

**No. 1 FORK BAR.**

Weight, 15½ lbs.; length, 4 ft. 6 in.; fork, 8 in. wide.

No. 34.—No. 1 FORK BARS each, \$4.25

**No. 2 FORK BAR.**

Weight, 16 lbs.; length, 4 ft. 9 in.; fork, 8 in. wide.

No. 35.—No. 2 FORK BARS each, \$4.50

**No. 3 FORK BAR.**

Weight, 12½ lbs.; length, 4 ft. 9 in.; fork, 6 in. wide.

No. 36.—No. 3 FORK BARS each, \$4.00

**No. 4 FORK BAR.**

Weight, 13 lbs.; length, 4 ft. 10½ in.; fork, 6 in. wide.

No. 37.—No. 4 FORK BARS each, \$4.25

Our fork bars are forged of solid steel, with chisel-shaped points, and are much superior to those made with prongs screwed in. Their use is principally for barring off floats or for general splitting purposes, and they are preferred by some to the splitting forks on account of covering a wider wedging surface in the groove.

Nos. 3 and 4 are much used for splitting off the cakes from the strips in the canal, especially if the grooves are frozen.



BREAKING BAR.

Weight, 16½ lbs.; length, 4 ft. 8 in. pad, 7½ in. x 4¾ in.; chisel blade, 2¾ in. wide.

No. 40.—BREAKING BARS each, \$3.25

This tool, having a wedge-shaped "pad," or blade, is used to insert in the plow-grooves, and thus detach the sheets or floats from the main body of the ice, and also to break up these floats into strips. The chisel end is merely for convenience, in case a sharp end is required.

The pad end is provided with ears on which to bear the foot.

It has a blunt edge, which is not intended to reach the bottom of the groove, the scam being wedged open.



CALKING BAR.

Weight, 9 lbs.; length, 4 ft. 6 in.; blade, 15 in. x 4 $\frac{3}{4}$ in.

No. 41.—CALKING BARS, hollow handles each, \$2.50

This bar is used to calk the ends of the grooves on the field of ice, and on the floats before they are detached, with the chips made in grooving, in order to prevent the water from running in.

The blade is made long and thin, suitable for calking the deepest grooves; and the handle is of gas-pipe, to make the tool light.



BAR CHISEL.

Weight, 15½ lbs.; length, 4 ft. 7 in.; blade, 12 in. x 4¾ in.

NO. 42.—BAR OR PACKING CHISELS, steel handles . . . each, \$3.25

The bar chisel is made with a wide blade, bevelled on one side, and is used mostly to cut around the cakes in getting ice out of the house. It is also used for trimming off any unevenness of the blocks when stowing ice in the house, and for breaking out the canal, cutting holes, or any work requiring a fast-cutting chisel.



SUMMER BAR.

No. 43. — Weight, 17 lbs.; length, 4 ft. 4 in.; blade, 10 x 5½ in.
No. 43½. — " 16 " " 4 " 3 " " 9 x 4¾ "

No. 43. — Weight, 17 lbs.; length, 4 ft. 4 in., blade, 16 x 5 $\frac{3}{4}$ in.
No. 43 $\frac{1}{2}$. — " 16 " " 4 " 3 " " 9 x 4 $\frac{3}{4}$ "

No. 43. — SUMMER BARS, heavy, fully polished . . . each, \$5.00

No. 43.	—	SUMMER BARS, heavy, fully polished	5.00
No. 43.	—	“ “ light, “ “	4.50

No. 43 $\frac{1}{4}$.—	"	"	light,	"	4.50
No. 43 $\frac{1}{2}$.—	"	"	heavy, painted handle	"	4.50

This bar is made wholly of steel, is heavier than the bar ehisel, and is used in some localities for the double purpose of cutting around and striking up ice in the houses. It is a first-class tool.

**STARTING CHISEL. EASTERN PATTERN.**Weight, $14\frac{1}{2}$ lbs.; length, 4 ft. 7 in.; blade, $10 \times 2\frac{1}{4}$ in.

No. 44. — STARTING CHISELS (Eastern Pattern) . . . each, \$3.25

The starting chisel, or striking-nder bar, is made for the purpose of starting up the blocks of ice in the house after they have been cut around with the bar chisel or summer bar, and is curved to prevent too great stooping of the body.

Made of steel throughout, and equal to the heaviest work.

It is also a favorite bar for "wetting down" a fall of snow, although the blade is wider than the regular No. 52 punching bar.

**WESTERN STARTING CHISEL.**Weight, $14\frac{1}{2}$ lbs.; length, 4 ft. 7 in.; blade, $10 \times 2\frac{1}{4}$ in.

No. 45. — WESTERN STARTING CHISEL . . . each, \$3.25

Made with decided angle at the bend, and blade perfectly straight on bottom side, without upward curve.

**SOCKET CHISEL.**Weight, 10 lbs.; length, 4 ft. 10 in.; blade, $12 \times 5\frac{1}{2}$ in.

No. 46. — SOCKET CHISELS . . . each, \$3.25

Similar to a bar chisel, but wider, and with a wooden handle, making it lighter in weight.

**PATENT FLOOR SHAVER.**

Weight, 6 lbs.; length, 4 ft. 10 in.; blade, 6 in. wide.

No. 47 $\frac{1}{2}$. — PATENT FLOOR SHAVERS, 5 teeth . . . each, \$3.00

Floor shavers are very useful in leveling a floor of ice in house or vessel, being bent for convenience in operating.

The toothed floor shaver cuts rapidly and easily, and the patented rocking blade causes the "feed" to be accurate.

**KNOB HANDLE SPLITTING CHISEL.**Weight, $13\frac{1}{2}$ lbs.; length, 4 ft. 6 in.; blade, $10\frac{1}{2} \times 3$ in.

No. 48. — KNOB HDLE. SPLITTING CHISELS, steeled blade, each, \$2.25

No. 48 $\frac{1}{2}$. — " " " " all tool-steel blade, " 2.50



RING HANDLE SPLITTING CHISEL.

Weight, 14 lbs.; length, 4 ft. 7½ in.; blade, 10½ x 3 in.

No. 49. — RING Hdle. SPLITTING CHISELS, steeled blade, each, \$2.50

No. 49½. — “ “ “ “ all tool-steel blade, “ 2.75

The splitting chisel is made with a narrow blade, and with a gradual bevel on both sides. It is used to split blocks or strips into cakes, either in the canal or on the platform, and also comes into use for wetting down an ice-field, and for various other purposes, being a light and handy tool.

It is a favorite around artificial ice factories.

The solid steel bladed ones are naturally stiffer.



RING HANDLE, SAW-TOOTH CHISEL.

Weight, 14 lbs.; length, 4 ft. 7½ in.; blade, 10½ x 3 in.

No. 50. — KNOB Hdle. SAW-TOOTH CHISELS, all tool-steel blade, each, \$2.75

No. 51. — RING “ “ “ “ “ “ “ “ 3.00

When grooves become frozen, or are of insufficient depth, this style chisel is very effective.



PUNCHING BAR.

Weight, 13 lbs.; length, 4 ft. 7½ in.; blade, 10½ x 12½ in.

No. 52. — PUNCHING BARS, all tool-steel blade, . . . each, \$2.25

This tool is especially adapted for wetting down a field of ice after it has had a fall of snow upon it.



RING NEEDLE BAR.

Weight, 11 lbs.; length, 5 ft.

No. 56. — RING NEEDLE BARS, all steel . . . each, \$2.00

The needle bar, which we make entirely of steel, is a very light tool for splitting off cakes in the canal, and where the plow-grooving is well done it is liked better than the heavier chisels.



THREE-TINED NEEDLE BAR.

Weight, 13 lbs.; length, 5 ft.

No. 57. — THREE-TINED NEEDLE BARS . . . each, \$4.50

The three tines give a broader bearing in the groove than a single tine, and where the ice is not well plowed, or has become frozen up, it is more effective for separating strips or cakes.

**NO. 1 CANAL CHISEL.**Weight, 14 lbs.; length, 6 ft.; blade, $10\frac{1}{2} \times 3$ in.

No. 58. — NO. 1 CANAL CHISELS, all tool-steel blade . . . each, \$2.75

This chisel is six feet long, and is intended for use in the canal when the operator stands on a raised platform.

**NO. 2 CANAL CHISEL.**Weight, $7\frac{1}{2}$ lbs.; length, 7 ft.; blade, $10\frac{1}{2} \times 3$ in.

No. 59. — NO. 2 CANAL CHISELS, wood handle . . . each, \$2.50

Much lighter than No. 58, and sometimes preferred when the ice is well grooved.

**HOOK CHISEL.**Weight, $7\frac{1}{2}$ lbs.; length, 7 ft.; blade, $10\frac{1}{2} \times 3$ in.

No. 60. — HOOK CHISELS each, \$3.00

The hook chisel is a canal chisel and ice hook combined, and has a wooden handle. We make it heavy enough for splitting well, the hook being secondary in importance.

**KNOB HANDLE SEPARATING CHISEL.**Weight, 14 lbs.; length, 4 ft. 6 in.; blade, $16 \times 3\frac{3}{4}$ in.

No. 62. — KNOB HANDLE SEPARATING CHISELS, all tool-steel blade, each, \$2.75

No. 63. — RING " " " " " " " 3.00

This chisel has a long, thin blade, and is designed for separating cakes of ice in the ice-house *when packed on edge*.

**DOUBLE-CAKE BAR.**Weight, 12 lbs.; length, 4 ft.; pad, $4\frac{1}{4}$ in. wide.

No. 64. — DOUBLE-CAKE BARS each, \$2.50

The double-cake bar is made with a steel pad with *blunt edge*, similar to that of the breaking bar. It has no sharp edge.

It is only useful in cases where ice is stored in large blocks which require to be grooved by the hand plow before being taken out of the houses.

ICE SAWS.

Our ice saws are made in the most superior manner, and are not to be compared with the cheaper kinds usually sold. The blade is tempered for long service, and is patent-ground. The teeth are extra long, and have a large bevel, causing them to cut very rapidly. The iron handle is excellent in pattern, and is reversible, so that the wood can be put on either parallel with the blade or at a right-angle, as may be desired.



Every saw is etched with our name.

Weight, with case, 4 ft., 13½ lbs.; 4½ ft., 15 lbs.; 5 ft., 16½ lbs.

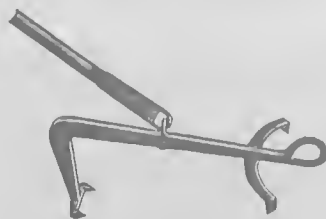
No. 70.—	ICE SAWS,	4	feet,	best quality,	with case	each,	\$5.00
No. 71.—	"	4½	"	"	"	"	5.25
No. 72.—	"	5	"	"	"	"	5.50
No. 74.—	"	4	"	"	without case	"	4.50
No. 75.—	"	4½	"	"	"	"	4.75
No. 76.—	"	5	"	"	"	"	5.00

Unless instructions are given to the contrary, saws with painted cases, having leather straps, will be shipped on orders.

The saw is a very necessary article in cutting ice, as it must be used in opening the channel, and also in sawing the sheets or "floats" out of the field.

Five feet is the best length for fast work where the depth of water will permit its use.

GRAPPLES, ETC.



POLE GRAPPLE.

Weight, without handle, 13 lbs.; drop, 8 in. Other sizes made to order.

No. 78.—	POLE GRAPPLES,	with handle	each,	\$4.25
No. 79.—	"	without handle	"	3.75

The grapple, or drag, is used to draw eakes of ice up an inclined plane by horse or steam power, in the absence of elevator machinery. A pole handle is attached by which to carry it down the incline, though oftentimes the grapple is arranged to slide back in a trough or upon a wire, thus dispensing with the handle.

We make them of Norway iron, and they will do very severe service.

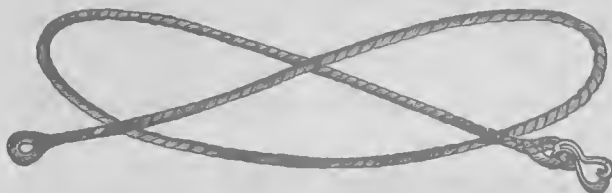
**JACK GRAPPLE.**

Weight, 19 lbs.; drop, 8 in.

No. 81.—JACK GRAPPLES each, \$4.25

This kind of grapple is employed for the same purposes as No. 78. Being made with a stationary handle, it is considered better by some than the other pattern. It is easily changed from a right to a left-hand grapple.

It is substantially made, with solid points, and steeled with the best steel.

**PLOW ROPE.**

Length, 8 ft.

No. 82.—PLOW ROPES each, \$1.50

These are made of the best manila rope, 1 inch diameter, with a thimble spliced in one end for the whiffletree-hook, and a pair of sister-hooks in the other end by which to fasten to the plow.

Made with sister-hooks in both ends to order.

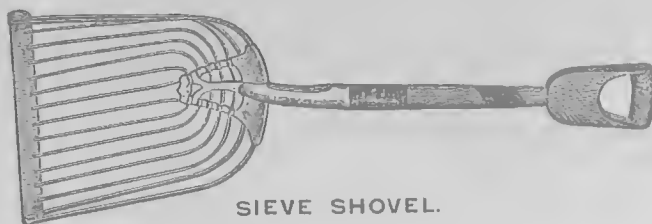
**ELEVATOR FORK.**

Length, 6 ft. 7 in.; tines, 6 in. long.

No. 83.—ELEVATOR FORKS each, \$1.50

This article is deemed better than an ice hook for feeding ice to the elevator, as two pushing points give better control of the cake than one. The hook affords a means of holding back the ice, if necessary.

Handle, 6 feet long. Longer ones put on to order.

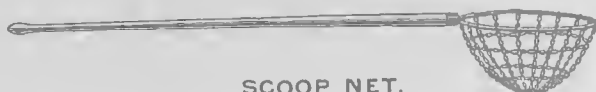


SIEVE SHOVEL.

Weight, 7 lbs.; size of shovel, 17 x 14 in.

No. 85.—SIEVE SHOVELS, 40-in. handle each, \$1.75

This substantially-made scoop is very useful in clearing the canal of chips and pieces of ice. Some prefer it to the scoop net.



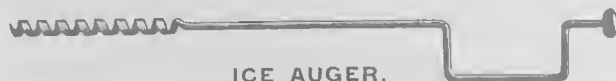
SCOOP NET.

Weight, 7 lbs.; handle, 5 ft.; hoop, 15 in. diam.

No. 86.—SCOOP NETS each, \$3.00

These are made as light as possible by the use of welded chain.

The scoop net is used to remove from the water small pieces of ice which obstruct the channel more or less, and it has the advantage of not freezing so as to impair its straining qualities.



ICE AUGER.

Weight, 6 lbs.; length, 3 ft. 6 in.

No. 88.—ICE AUGERS, 1½ inch each, \$3.50

This auger is made with an easy-working head and a long shank, enabling the person to retain a standing position while using. It is used principally in making holes through which to measure the ice, as well as in which to insert pins for stretching lines, towing floats, and other purposes.



MEASURING IRON.

No. 89.—MEASURING IRONS, polished, 22 inch each, \$0.50

A companion article for the ice auger.



ICE TOOL GRAPPLE.

Weight, 5 lbs.; length of springs, 2 ft.

No. 89½.—ICE TOOL GRAPPLES, without handle each, \$3.00

This grapple is very effective in recovering tools which have been dropped into the water. The springs are stiff and will grasp a chisel firmly.

**LINE MARKER.**

Weight, 2 lbs.; length, 4 ft. 8 in.

No. 90.—**LINE MARKERS** each, \$0.90

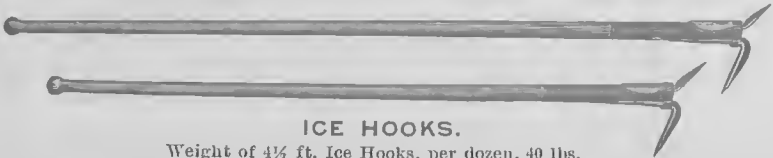
This tool is a simple contrivance for the purpose of making a line by means of a straight edge in which to run the marker teeth, thus making the first groove in marking out the field of ice. For those who have no hand plow, it is a sufficient substitute for this purpose.

ICE HOOKS.

Our ice hooks are manufactured of the best Norway iron, and are heavily steeled, making them very stiff and strong, without being heavy and unhandy.

No ice tool is put to a more severe test by ice-dealers than the ice hook. We take pride in furnishing a style that will stand reasonable abuse on the run by the inexperienced, and will meet the most critical exactions of the "old hand," who wants perfect temper and proper shape for loading or delivering.

We pay particular attention to having the handles of extra quality and of correct size, with large knobs.

**ICE HOOKS.**Weight of $4\frac{1}{2}$ ft. Ice Hooks, per dozen, 40 lbs.**Boston Pattern** has wide points, and is most generally used.**New York Pattern** has narrow points, and is preferred in some localities.

No. 100.— ICE HOOKS , 3 and $3\frac{1}{2}$ ft., turned ash handles, per doz.,							\$9.00
"	"	4	"	"	"	"	9.25
"	"	$4\frac{1}{2}$	"	"	"	"	9.50
"	"	5	"	"	"	"	10.00
"	"	6	"	"	"	"	10.50
"	"	7	"	"	"	"	11.00
"	"	8	"	"	"	"	12.00
"	"	10	"	"	"	"	13.00
"	"	12	"	"	"	"	14.00
"	"	14	"	"	"	"	15.50
"	"	16	"	"	"	"	17.00
"	"	18	"	"	"	"	18.50

Ice Hooks with "Kennebec Handles," having $2\frac{1}{4}$ -inch knobs, on hand at factory. Prices upon application.

The ice hook, though so simple in its appearance, is absolutely necessary in the handling of ice, and is to every ice-dealer a very important part of a "set of tools."

4½-**FEET** **HOO****KS** are most commonly employed for use on the runs, in the houses, or in loading wagons, although in some localities 5-feet are preferred for these purposes.

4-**FEET** **HOO****KS** are adapted for general use on very thick ice.

3 and 3½-**FEET** **HOO****KS** are used principally in the holds of vessels.

Canal hooks, 6 to 8 feet long, are for feeding the strips or cakes through the canal.

Floating hooks, 10 to 18 feet long, are used for floating the large sheets of ice from the field to the canal.

Pullers, shovers, rings, and rivets, we furnish to customers who prefer to do their own repairing.

 *We have a full line of best ash handles constantly on hand.*



CAR ICE HOOK.

No. 102.—**CAR ICE HOO****KS**, 4 feet per doz., \$12.00

Made the same as regular ice hooks, excepting that the shover iron extends 18 inches down the handle, to strengthen and protect the wood for car use.

Stock length, 4 feet. Some car packers prefer 3 feet 8 inches.



CANT ICE HOOK.

No. 104.—**CANT ICE HOO****KS**, 4 or 4½ feet hdl. per doz., \$16.00

No. 105.— " " " unattached " 6.00

The use of the cant ice hook is to "edge up" ice when packing into houses or barges, as is the custom with many Western packers.

4-foot handles and right-handed hooks (like engraving) will be sent in the absence of special directions.

No. 107.—**PULLERS**, for Ice Hooks per doz., \$4.50

No. 108.—**SHOVERS**, " " " 2.75

No. 109.—**RINGS**, " " " .35

No. 110.—**RIVETS**, " " (2 doz. required for 1 doz. hooks) " .03

ICE TONGS.

All our patterns of ice tongs, whether for hoisting, lowering, or hand use, are *made of steel*, causing them to be very light and stiff.

Prices are based on their quality and cost. Our tongs cannot be compared with the cheap ones ordinarily sold.

The span of our tongs is indicated in inches when they are open as wide as possible, — no allowance being made for the hands.



13 in.,
34 lbs. per doz.



14½ in.,
39 lbs. per doz.



16½ in.,
46 lbs. per doz.



24 in.,
62 lbs. per doz.

BOSTON TONGS.

Regular grade (painted red). Solid swell handles, steel bows, and *best tool-steel points*.

No. 115.	—	BOSTON TONGS,	family size,	span 13 inches,	per doz.,	\$14.00
"	"	small	"	14½	"	15.00
"	"	medium	"	16½	"	16.00
"	"	loading	"	24	"	18.00
"	"	extra	"	26	"	19.00



13 in.



14½ in.



16½ in.



WOOD HANDLE TONGS.

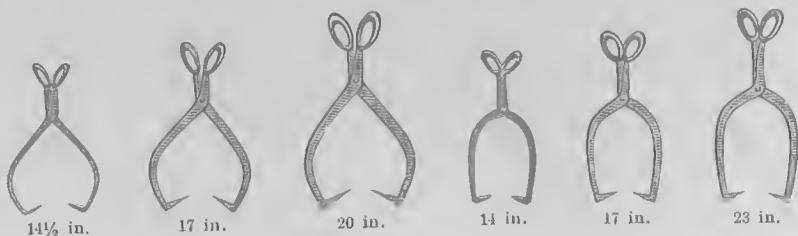
HOLLOW HANDLE TONGS, BOSTON PATTERN.

Standard grade (painted blue). Large gas-pipe handles, steel bows, and *best tool-steel points*.

Extra grade (painted black). Large gas-pipe handles, and *best tool-steel bows and points entire*.

Wood handle tongs have *best tool-steel bows and points entire*.

No. 115½.	—	STANDARD HOLLOW HANDLE TONGS,	13 in.,	per doz.,	\$16.00
"	"	"	14½	"	17.00
"	"	"	16½	"	18.00
No. 116.	—	EXTRA HOLLOW HANDLE TONGS,	13 "	"	19.00
"	"	"	14½	"	20.00
"	"	"	16½	"	21.00
No. 117.	—	WOOD HANDLE TONGS,	14½ in. or 16½ "	"	24.00



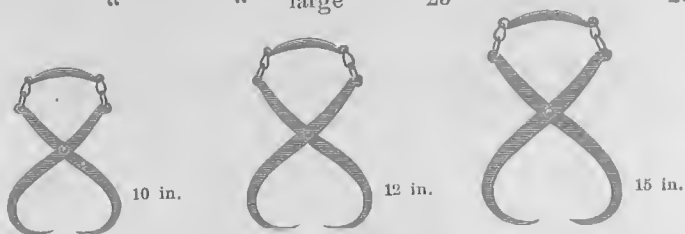
NEW YORK TONGS.

PHILADELPHIA TONGS.

New York Tongs have solid swell handles, steel bows, and *best tool-steel points*.

Philadelphia Tongs have solid swell handles, and *best tool-steel bows and points entire*.

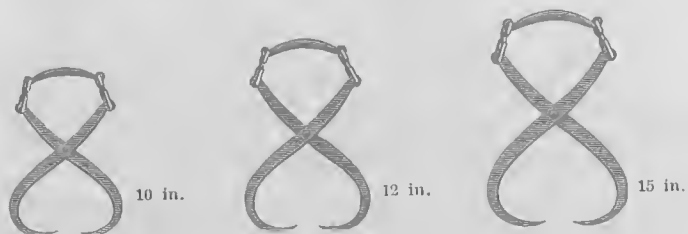
No. 118.—NEW YORK TONGS,	family size,	14½ inch,	per doz.,	\$14.00
“ “ “	small	“ 17	“ “	15.00
“ “ “	medium	“ 20	“ “	16.00
“ “ “	large	“ 24	“ “	18.00
No. 119.—PHILADELPHIA TONGS,	small	“ 14	“ “	17.00
“ “ “	medium	“ 17	“ “	20.00
“ “ “	large	“ 23	“ “	23.00



CINCINNATI, OR CHAIN TONGS. (TWO-LINK CHAIN.)

Steel arms, and *best tool-steel points*.

No. 120.—CINCINNATI, OR CHAIN TONGS,	10 inch span,	per doz.,	\$12.00
“ “ “	12 “ “	“ “	12.50
“ “ “	15 “ “	“ “	13.00



PATENT LINK CINCINNATI TONGS.

Steel arms, and *best tool-steel points*.

The Patent Link Tongs are rapidly growing in favor where they are known.

No. 121.—PATENT LINK CINCINNATI TONGS,	10 in. span,	per doz.,	\$12.00
“ “ “	12 “ “	“ “	12.50
“ “ “	15 “ “	“ “	13.00

Delivery tongs, as we make them, are the *very best models* which experience can produce, and their quality cannot be excelled. All our tong-points—which are of fine steel—are carefully tempered to hold sharp edges and to do long service.

All the leading styles are carried in stock, and we always hold ourselves ready to make special patterns to order.

The Boston pattern of hand tongs, made in "Regular," "Standard H. H.," and "Extra H. H." grades, is far more universally used throughout the United States than any other style. It catches the ice low on the sides, and, having short shanks, raises the cake clear from the ground.

Hollow Handle Tongs have gas-pipe handles of special quality, $\frac{7}{8}$ inch diameter. They are very popular and are rapidly taking the place of the regular solid handle tongs, being no heavier and much more comfortable for the hand. The Extra grade has best tool-steel in the *bows* as well as in the points, is positively the stiffest kind of tongs that can be made, and is used by those whose work is unusually severe.

New York and Philadelphia Tongs and Cincinnati Chain Tongs are used in localities where the users have become accustomed to them, and we make our patterns true to the conventional shapes.

Buffalo Tongs have a special, small and narrow handle, adapted to being grasped with the fingers *underneath* the ring instead of *in* it, and they are popular in other cities than Buffalo.



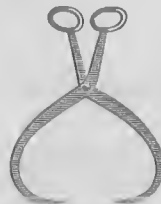
**BUFFALO
TONGS.**

Weight, $2\frac{1}{4}$ lbs.



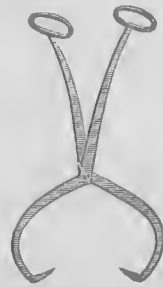
**EASTERN
EDGING-UP TONGS.**

Weight, 4 lbs.



**UTAH
EDGING-UP TONGS.**

Weight, 4 lbs.



DRAG TONGS.

Weight, 7 lbs.

No. 121 $\frac{1}{2}$.—BUFFALO TONGS, black, 12-in. span, . per doz., \$15.00

No. 121 $\frac{1}{2}$.— " " polished, " " " 20.00

If wanted with Boston swell handles, extra, . . . " 2.00

No. 122.—EASTERN EDGING-UP TONGS, solid handles, 25-in. span, per doz., \$18.00

No. 123.—UTAH " " hollow " 19 " " 20.00

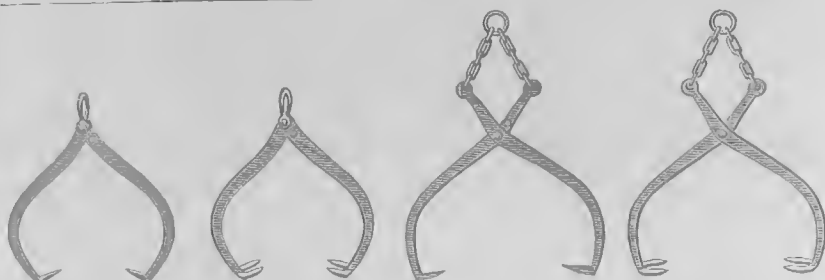
Used by packers who edge up their ice when stowing in the house.

The Eastern pattern spans the entire cake. The Utah pattern catches the cake on the side and top.

No. 124.—DRAG, OR STOWING TONGS, solid handles, per doz., \$21.00

No. 125.— " " " " hollow " " 23.00

These are used in some localities for stowing ice in houses. They are made with long handles to enable the user to maintain a convenient position.



SINGLE POINT
LOWERING TONGS.

Weight, 5½ lbs.

DOUBLE POINT
LOWERING TONGS.

Weight, 6 lbs.

SINGLE POINT
MARKET TONGS.

Weight, 8 lbs.

DOUBLE POINT
MARKET TONGS.

Weight, 8½ lbs.

No. 130. — SINGLE POINT LOWERING TONGS, 24-in. span,	each,	\$2.00
No. 130½. — " " " " 17 " "	"	2.00
No. 131. — DOUBLE " " " 24 " "	"	2.75
No. 131½. — " " " 17 " "	"	2.75

Designed for work where only a small space overhead exists. Being of steel, they are strong enough for ordinary hoisting, and are light to handle.

Use the smallest span you can for your work, as the grip is stronger the more open they are.

No. 132. — SINGLE POINT MARKET TONGS, 24 in. span,	each,	\$3.00
No. 133. — DOUBLE " " " 24 " "	"	3.75

Where head-room will admit, market tongs are preferred by some to the lowering pattern for filling ice-boxes and market refrigerators.



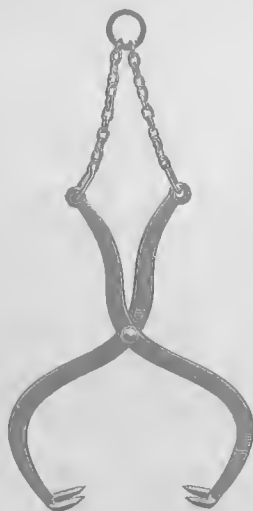
ADJUSTABLE CLAW
HOISTING TONGS.

Weight, 21½ lbs.

The adjustable claws used are *forged* solid from steel, and are of skeleton shape, giving a sure grip on uneven cakes of ice.

The stationary solid claw will also hold firmly.

(MADE OF
STEEL.)



SOLID CLAW
HOISTING TONGS.

Weight, 18½ lbs.

No. 135. — ADJUSTABLE CLAW HOISTING TONGS . . .	each,	\$6.00
No. 137. — SOLID " " " . . .	"	4.50

Used for hoisting ice directly from the water to the platform, in the absence of an incline, or for lowering ice from houses, for loading vessels, etc.

ICE AXES.

In the manufacture of this class of ice edge-tools we strive to gain a degree of perfection which will meet every requirement of the experienced user, both in beauty of shape and in the wearing qualities of a keen cutting edge.

We offer in styles a sufficient variety to cover the demands of customers of varying ideas, at prices as low as their superior merits will admit.

Other styles to order.

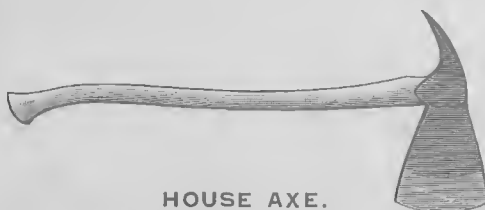


TAPPING AXE.

Weight complete, 6 lbs.; handle, 36 in.; blade, 3 in.

No. 140.—TAPPING AXES per doz., \$24.00

This axe is used by some for wetting down snow on the ice-field instead of the No. 49 splitting chisel, the No. 44 starting chisel, or the No. 52 punching bar, on account of its being lighter to handle than those tools.



HOUSE AXE.

Weight complete, 6½ lbs.; handle, 36 in.; blade, 6½ in. wide.

No. 141.—HOUSE AXES per doz., \$36.00

This axe is used for cutting around cakes in the house instead of the bar chisel or summer bar, and is particularly adapted to this work where the ice is packed on edge.



BOSTON ICE AXE.

Weight complete, 4 lbs.; handle, 30 in.;
blade, 8 x 1½ in., square edge.



CHICAGO ICE AXE. (2½ IN.)

Weight complete, 4 lbs.; handle, 30 in.;
blade, 8 x 2½ in., round edge.



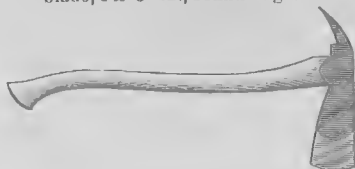
CHICAGO ICE AXE. (3 IN.)

Weight, complete, 4 lbs., handle, 30 in.;
blade, 8 x 3 in., round edge.



NEW YORK ICE AXE. (3 IN.)

Weight, complete, 4½ lbs.; handle, 30 in.;
blade, 7½ x 3 in., square edge.



NEW YORK ICE AXE. (3½ IN.)

Weight, complete, 5 lbs.; handle, 32 in.;
blade, 7½ x 3½ in., square edge.

Heavier axes made to order.



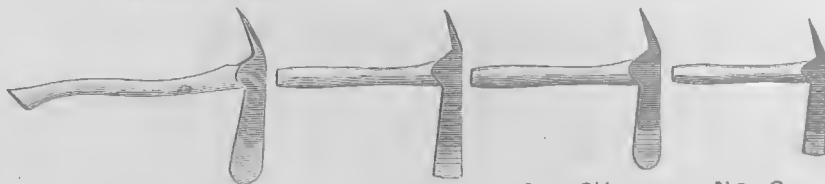
PHILADELPHIA ICE AXE.

Weight, complete, 4¾ lbs.; handle, 30 in.;
blade, 7½ x 3 in., round edge.

Made with 20 in. handles to order.

No. 142. — BOSTON	ICE AXES,	8 x 1¾ in. blade,	per doz.,	\$20.00
No. 144. — CHICAGO	" "	8 x 2½ " "	" "	20.00
No. 145. — " "	" "	8 x 3 " "	" "	20.00
No. 146. — NEW YORK	" "	7½ x 3 " "	" "	20.00
No. 147. — " "	" "	heavy, 7½ x 3½ in. blade,	" "	21.00
No. 148. — PHILADELPHIA	ICE AXES,	3 in. blade,	" "	20.00

Note. — Philadelphia axes with hook are same as No. 145 — 3 inch Chicago axes.



**No. 1
SOUTHERN AXE.**

Weight, 3½ lbs.;
Handle, 22 in.;
Blade, 2½ in. wide.

**No. 2
SOUTHERN AXE.**

Weight, 2½ lbs.;
Handle, 16 in.;
Blade, 2¼ in. wide.

**No. 2½
SOUTHERN AXE.**

Weight, 2½ lbs.;
Handle, 16 in.;
Blade, 2¼ in. wide.

**No. 3
SOUTHERN AXE.**

Weight, 2 lbs.;
Handle, 16 in.;
Blade, 2 in. wide.

No. 150. — No. 1	SOUTHERN ICE AXES,	round edge,	per doz.,	\$18.00
No. 151. — No. 2	" "	square " "	" "	16.00
No. 151½. — No. 2½	" "	round " "	" "	16.00
No. 152. — No. 3	" "	square " "	" "	15.00

The use of ice axes is well known to be for splitting cakes of ice into pieces suitable for retailing.

All our axes are heavily steeled with extra quality tool steel, and are tempered to carry a keen edge.

Weights of all axes are complete, including handle.

ICE AWLS, SAWS, SHAVERS, ETC.

SPLITTING AWL,
ROUND HDLE.

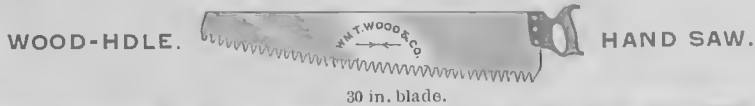
ICE CHIPPER.

- No. 155. — SPLITTING AWLS, needle point, round handle, per doz., \$2.00
 No. 155½. — " " " " brass " " 10.00
 No. 156. — " " " " chisel " " 2.00

Regular size of blade, 6 x 2½ in. Other sizes made to order.

- No. 157. — ICE CHIPPERS, finest quality . . . per doz., \$8.00

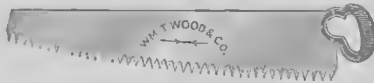
These ice chippers are as fine as it is possible to make, and stand no comparison with the ordinary articles of similar appearance.



WOOD-HDLE.

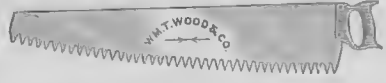
HAND SAW.

30 in. blade.



OVAL IRON-HDLE. HAND SAW.

30 in. blade.



GUARD IRON-HDLE. HAND SAW.

39 in. blade.

- No. 159. — WOOD-HANDLE HAND SAWS, 30 in. . . . each, \$1.25
 No. 159½. — OVAL IRON-HANDLE " " " . . . " 1.25
 No. 158½. — GUARD " " " " " . . . " 1.50

The iron handles used on our saws are made of malleable iron.



Weight,
3 lbs.

Length of blade,
18 in.

ICE CLEAVER, OR HACK.

- No. 159¾. — ICE CLEAVERS each, \$2.50
 These are used by some in place of the axe.



(Shaver teeth beveled on one side only.)

LONG HANDLE 4-POINT ICE SHAVER.

Weight, 4 lbs.; length, 3 ft. 11 in. Blade, large, 7½ x 4¾ in.; small, 6½ x 4¼ in.

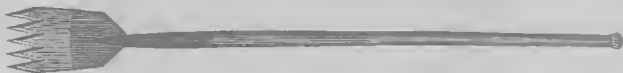
- No. 160. — LONG HDLE. 4-POINT ICE SHAVERS, large blade, each, \$2.25
 No. 160½. — " " " " " small " " 2.25



D HANDLE 4-POINT ICE SHAVER.

Weight, 4 lbs.; length, 3 ft. 5 in. Blade, large, 7½ x 4¾ in.; small, 6½ x 4¼ in.

- No. 161. — D HANDLE 4-POINT ICE SHAVERS, large blade, each, \$2.25
 No. 161½. — " " " " " small " " 2.25



LONG HANDLE 5-POINT ICE SHAVER.

Weight, 5 lbs.; length, 4 ft.; blade, $8\frac{1}{2} \times 6$ in.

No. 164. — LONG HDLE. 5-POINT ICE SHAVERS, 6 in. wide, each, \$2.50

No. 164 $\frac{1}{2}$. — " " " MICHIGAN " $7\frac{1}{2}$ " " " 2.75



D HANDLE 5-POINT ICE SHAVER.

Weight, 5 lbs.; length, 3 ft. 6 in.; blade, $8\frac{1}{2} \times 6$ in.

No. 164 $\frac{1}{2}$. — D HDLE. 5-POINT ICE SHAVERS, 6 in. wide . each, \$2.50

No. 164 $\frac{5}{8}$. — " " " MICHIGAN " $7\frac{1}{2}$ " " " 2.75



(Slusher teeth beveled on both sides.)

FINE TOOTH SLUSHER, KNOB HANDLE.

Weight, 5 lbs.; length, 3 ft. 4 in.; blade, 7×5 in.

No. 164 $\frac{3}{4}$. — FINE TOOTH SLUSHERS, knob handle, 5 in. wide, each, \$2.50

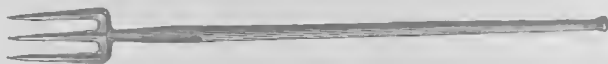
Shavers and slushers are used to shave ice into fine pieces, when delivered by the basket, for saloon or restaurant use.

The 4-point shavers are in most common use for wagon delivery work.

The 5-point shavers are adapted for large operations in fish markets and ice-cream factories.

Slushers are used for shaving ice into a fine snow state.

The steel used in these shavers is specially made for the purpose and is of extra quality. The points will hold a fine edge, and the serviceability of our shavers will justify their apparently high price.



LONG HANDLE ICE BREAKER.

Weight, $5\frac{1}{2}$ lbs.; length, 4 ft. 1 in.; length of tines, $7\frac{3}{4}$ in.; width at points, 3 in.

No. 162. — LONG HANDLE ICE BREAKERS each, \$3.50



D HANDLE ICE BREAKER.

Weight, $5\frac{1}{2}$ lbs.; length, 3 ft. 7 in.; length of tines, $7\frac{3}{4}$ in.; width at points, 3 in.

No. 163. — D HANDLE ICE BREAKERS each, \$3.50

Breakers are not made for *splitting* large cakes of ice, but rather for reducing the cakes to coarseunks by a scaling process. They are very popular in fish markets, and are suited to rapid work.

When order does not mention kind of shavers or breakers, long handled style will be sent.



Showing the Use of the
POCKET ICE APRON.

The practice of wearing rubber aprons varies in different localities. The old custom is to wear a regular plain, rubber apron in front.

Ice can be carried much more easily on the back than in any other way. When delivery men get accustomed to this method, they never return to the "lugging" plan.

The pocket ice apron is a model for this use. A small sponge in each corner absorbs the water, which is thus conveniently removed. A small square of felt worn under the apron will take up the moisture of condensation.

No. 163½. — POCKET ICE APRONS, with harness complete each, \$2.25



HOUSE RUN, 6 FT.; WEIGHT, 75 LBS.

No. 165. — HOUSE RUNS, 6 feet, all steel each, \$9.00

The house run is useful in the houses and for loading wagons, and is made with a pair of flippers on one end, to cause the ice to slide on easily. Being made wholly of steel, it is very substantial.



CAR RUN, 7 FT.; WEIGHT, 105 LBS.

No. 166. — CAR RUNS, 7 feet, all steel each, \$12.50

The car run is used for loading cars, and has flippers on the delivering as well as on the receiving end.

Two arms on the bottom prevent the run from being jarred ahead when receiving the ice. Made wholly of steel.



ICE RUN IRON.

Weight per foot, 1½ lbs.

No. 168. — ICE RUN IRON* (drilled), in 10, 12, 14, 15, or 16 feet lengths (14 feet, usual length) per foot, 6 cts.

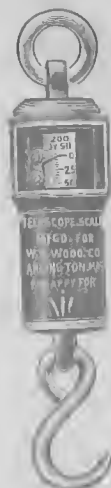
No. 168½. — HALF OVAL IRON, 1 x ¾ in. (drilled), 12 and 14 feet lengths per foot, 6 cts.

A large stock constantly on hand.

To use on wooden runs made without sides. The V surface slightly grooves the ice as it runs over it, and prevents the cakes from sliding off.

ICE SCALES.

Headquarters for all styles. Special prices by the dozen.



No. 170 1/2.
"TELESCOPE."



No. 171.
"DUPLEX."



No. 170.
"IRONCLAD."



No. 172.
"STRAIGHT."



No. 173.
"TUBULAR."

The "Telescope" we believe to be the most substantial moderate priced scale ever offered, and we expect it to become the favorite above all others. The indicator cannot rub, and the face-plate cannot get battered.

The "Duplex" scale has made many friends and can be relied upon. Wrought-iron jacket, and very durable.

The "Mogul" has double springs.

The "Ironclad" has malleable iron jacket, and has long been known to be a good scale for the money.

The "Straight" scale is popular where ice is weighed by 1 and 2 pound marks, and is widely sold.

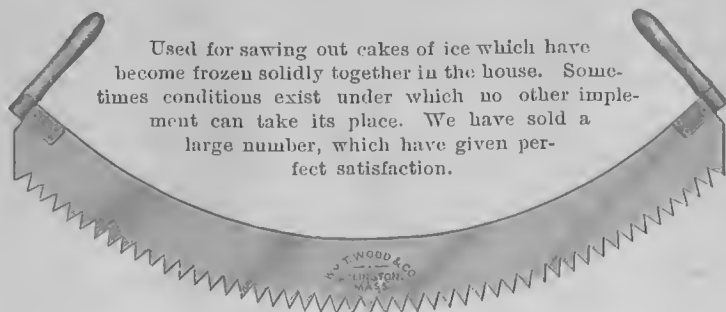
The "Tubular" has double springs, and is undoubtedly the best ice scale ever made. Although higher in price, it is cheaper in the end.

Reduce "Tubular" prices on page 55 \$2.00 each.

No. 170. — "IRONCLAD" ICE SCALES	200 lbs. by 5 lbs., each,	\$2.50
" " " "	300 " by 5 " "	3.00
" " " "	400 " by 5 " "	3.50
No. 170 1/2. — "TELESCOPE" ICE SCALES (adjustable),	200 " by 5 " "	3.00
" " " "	300 " by 5 " "	3.25
" " " "	400 " by 5 " "	3.50
No. 171. — "DUPLEX" ICE SCALES	200 " by 5 " "	3.00
" " " "	300 " by 5 " "	3.25
" " " "	400 " by 5 " "	3.50
" " " "	200 " by 2 " "	3.50
No. 172. — "STRAIGHT" ICE SCALES	80 " by 1 lb. "	1.50
" " " "	100 " by 1 " "	2.25
" " " "	125 " by 1 " "	2.75
" " " "	150 " by 1 " "	3.50
" " " "	200 " by 2 lbs. "	4.00
" " " "	250 " by 2 " "	4.50
No. 173. — "TUBULAR" ICE SCALES	200 " by 2 " "	6.00
" " " "	300 " by 2 " "	7.00
No. 174. — "MOGUL" ICE SCALES (double springs),	200 " by 5 " "	4.00
" " " "	300 " by 5 " "	4.00
" " " "	400 " by 10 " "	4.00

"STEEL KING" ICE SCALES, priced on page 55.

Repairing any kind of scales at reasonable prices.



Used for sawing out cakes of ice which have become frozen solidly together in the house. Sometimes conditions exist under which no other implement can take its place. We have sold a large number, which have given perfect satisfaction.

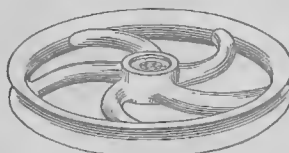
CRESCENT ICE SAW.

Weight, boxed for shipment, 50 lbs.; length, 6½ ft.; depth, 2 ft.; blade, 8 in. wide.

No. 169. — CRESCENT ICE SAWS each, \$18.00

ANTI-FRICTION

Weight, 9½ lbs.;
diameter, 12 in.



SHEAVE WHEEL.

Hole for ⅝ in. pin.

No. 186. — ANTI-FRICTION SHEAVE WHEELS, 12 in. . . each, \$1.50

These roller-bearing wheels are frequently wanted by customers who wish to incase them in wooden frames of their own manufacture, and especially when a stationary leading point is required.

HOISTING GINS.

We carry no common gins, as the constant necessity of oiling them makes them quite unsatisfactory as a practical wheel.

No. 182. — UPPER SELF-LUBRICATING GINS:

8 in. . .	each, \$4.50
10 " . .	" 5.25
12 " . .	" 6.75
14 " . .	" 8.00
16 " . .	" 9.50

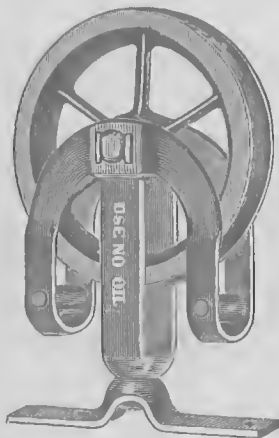
No. 183. — LOWER S. L. GINS:

8 in. . .	each, \$5.25
10 " . .	" 6.00
12 " . .	" 7.50
14 " . .	" 8.75
16 " . .	" 10.25



SELF-LUBRICATING UPPER GIN.

Weight of 12-in. size, 33 lbs.



SELF-LUBRICATING LOWER GIN.

Weight of 12-in. size, 39 lbs.

Self-lubricating gins can be run at quick speed without the use of any oil, and are always ready for use. They are much more profitable to ice-dealers — whose employees are liable to forget to oil the common gins — than any other kind.



GROOVING HARNESS.

No. 195. — GROOVING HARNESSES, with whiffletree . . each, \$12.50

No. 196. — HAMES, No. 10 size, strapped and painted, per pair, 2.50

These harnesses are so designed as to enable the horse to draw a plow or marker at the greatest possible advantage, and are of the pattern used by many large harvesters.

We make them by hand, from the best stock, and they are serviceable and convenient.

CREASEY ICE BREAKERS.



No. 50 SIZE.



No. 54 SIZE.

CREASEY ICE BREAKERS.

No. 199. — CREASEY ICE BREAKERS priced on page 56.

The Creasey Ice Breaker does not *crush* the ice which is thrown into it. It takes into its mouth, or top, a solid cake of ice and reduces it rapidly and easily to small pieces by *picking* it with sharp steel points, which are riveted to a revolving drum.

List of Creasey Ice Breakers and prices on page 56.

Send to us for complete illustrated catalogue of Creasey Ice Breakers.

**4-SLAT T-IRON SKID, 12 FT.**

Usual length, 12 ft.; weight, 110 lbs.

No. 187. — 4-SLAT T-IRON SKIDS, 8 feet long.	each,	\$7.00
“ “ “ 10 “ “	“	7.50
“ “ “ 12 “ “	“	8.00
No. 187½. — 3-SLAT “ “ 8 “ “	“	6.00
“ “ “ 10 “ “	“	6.50
“ “ “ 12 “ “	“	7.00

These runs are growing in favor, for use in houses, instead of wooden skids. They are very substantial, and the spurs on the bottom prevent them from sliding about when in use.

Our pattern is a great improvement over the ordinary T-iron skid. We make the centre bars of U-iron inverted, so that the ice will not settle too much if allowed to stand. The two outside T-iron bars are ground to a sharp V edge.

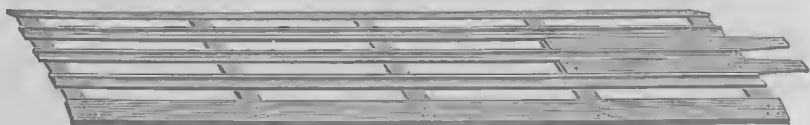
The 4-slat skids are 22 inches wide, and the 3-slat skids are 17 inches wide.

**WOODEN RUN, WITH SIDES, 12 FT.**

Usual length, 12 ft.; weight, 130 lbs.

No. 190. — WOODEN RUNS, with sides, 10 feet, 4 battens,	each,	\$8.50
“ “ “ “ 12 “ 5 “	“	10.25
“ “ “ “ 14 “ 5 “	“	11.75
“ “ “ “ 16 “ 6 “	“	13.50
No. 190½. — HOOKS AND EYES for No. 190 runs . . .	per pair,	.40

Wooden runs are made of spruce, fitted out with hooks and eyes, thoroughly constructed, amply ironed, and painted. Width, 28 inches inside, clear.

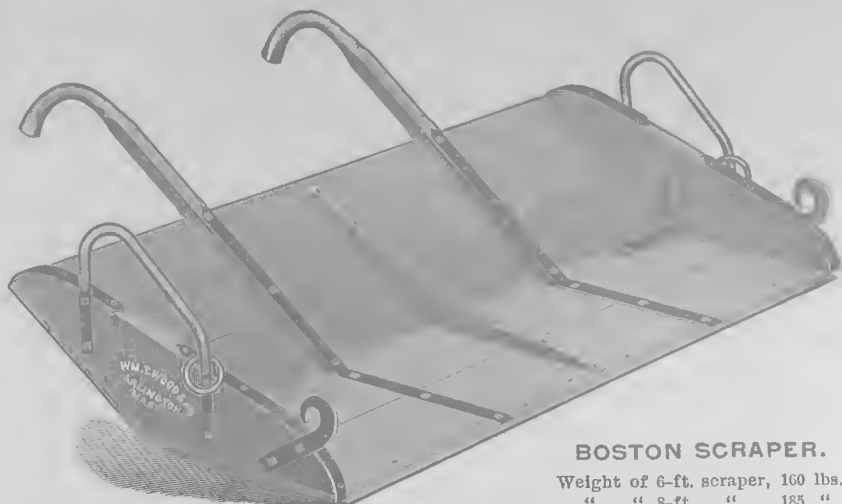
**WOODEN FLAT SKID, 14 FT.**

Usual length, 14 ft.; weight, 145 lbs.

No. 191. — WOODEN FLAT SKIDS, 12 feet, 4 battens . . .	each,	\$5.50
“ “ “ 14 “ 5 “ . . .	“	6.50
“ “ “ 16 “ 5 “ . . .	“	7.25

Made of oak strips one inch thick, well bolted together. The two outside run-strips are ironed with patent V-iron, and the centre one with 1 x $\frac{3}{8}$ inch half-oval iron.

The outside flat wings slant outward and aid the “pulling-off” process.



BOSTON SCRAPER.

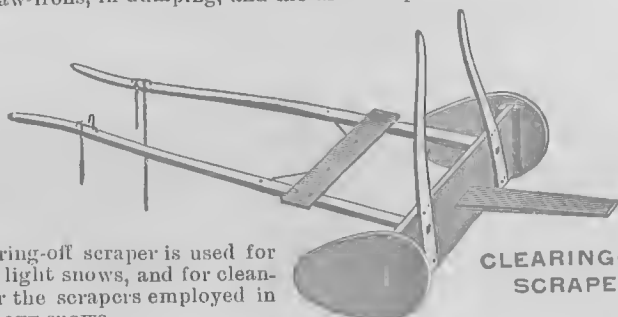
Weight of 6-ft. scraper, 160 lbs.
 " " 8-ft. " 185 "

- No. 205. — BOSTON SCRAPERS (no shafts), 6 ft. long . . . each, \$11.00
 No. 206. — " " " " 8 " " . . . " 12.00

This style is the most effective and popular scraper in use. Many large ice companies use no other kind for all depths of snow. We make them entirely of oak, and iron them in a substantial manner.

- No. 207. — ROPES, for 6 ft. Boston scrapers each, \$2.25
 No. 208. — " " 8 " " " " 2.25
 No. 209. — CHAINS, " 6 " " " " " 2.00
 No. 209½. — " " 8 " " " " " 2.25

Some customers like a rope for this scraper, and others a chain. We make either so that the scraper handles will rest on the side strands, near the point of union, when the scraper is dumped. The rings to which they are fastened slip along the draw-irons, in dumping, and the draft helps to reverse the scraper.



CLEARING-OFF SCRAPER.

The clearing-off scraper is used for clearing off light snows, and for cleaning up after the scrapers employed in removing heavy snows.

- No. 201. — CLEARING-OFF SCRAPERS, 6 ft. long each, \$9.00
 No. 202. — " " " 7 " " " 9.25
 No. 203. — " " " 8 " " " 9.50
 No. 200. — SCOOP SCRAPERS, 3 ft. wide (old style) . . . " 11.00
 SHAFTS, for clearing or scoop scrapers . . . " 6.00

SUGGESTIONS

ON SELECTING A SET OF ICE-CUTTING TOOLS.

We give below four specimen lists of tools, with brief headings, which, as a supplement to our catalogue descriptions, we hope may serve as a basis upon which new firms can form an estimate of their needs for their individual situations.

SET No. 1.

Suitable for harvesting 100 to 500 tons of ice, using three to six men and one horse, alternating plowing and raising ice with the horse, and hoisting into one room with one grapple.

If plowing and raising are to be done at once, two horses and more men will be required.

- | | | |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------|
| 1 No. A Ice King Plow.
(Or 1 No. AA, AB, or AC Twin-Gut Plow, if preferred.) | 1 No. 47½ Floor Shaver. | 1 No. 90 Line Marker. |
| 1 No. 31½ Splitting Fork.
(Or 1 No. 35 or No. 37 Fork Bar, if grooves are shallow.) | 1 No. 9 Ring Idle, Splitting Chisel. | 1 doz. No. 100 1½ (or 5 ft.) Ice Hooks. |
| 1 No. 41 Calking Bar. | 1 No. 72 5 ft. Ice Saw. | 1-12 " " " 6 ft. Ice Hooks. |
| 1 No. 42 Bar Chisel. | 1 No. 78 Grapple and handle.
(Or No. 81 Jack Grapple.) | 1-12 " " " 12 " " " |
| | 1 No. 82 Plow Rope. | 1-12 " No. 115 24 in. Boston Tongs. |
| | 1 No. 85 Sieve Shovel. | (Or 1-12 doz. No. 124 Drag Tongs.) |
| | (Or No. 86 Scoop Net is better.) | 1 No. 182 12-in. Upper Gln. |
| | | 1 No. 183 12-in. Lower Gln. |

Add Nos. Y1, 52, 58, 88, 89, 122, 123, 168, 187, 187½, 190, 191, 195, 196, 200-209½ articles as needed.

SET No. 2.

Suitable for harvesting 1,000 to 2,000 tons of ice, using, say, ten men and two horses, hoisting into two rooms with one grapple.

- | | | |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------|
| 1 No. 13 8-in. Swing Guide Plow, for ice 12 to 15 inches thick.
(Or No. 11 or No. 12 Plow if ice is thinner.) | 2 No. 47½ Floor Chisels. | 1 No. 82 Plow Rope. |
| (Or No. 14 or No. 15 Plow if ice goes to 18 or 20 inches thick.) | 1 No. 49 Ring Chisel. | 1 No. 90 Line Marker. |
| 1 No. 31 Splitting Fork. | 1 No. 56 Needle Bar. | 2 doz. No. 100 1½ (or 5 ft.) Ice Hooks. |
| 2 No. 41 Calking Bars. | 1 No. 57 3-tined Needle Bar. | 1-6 " " " 6 ft. Ice Hooks. |
| 2 No. 42 Bar Chisels. | 2 No. 72 5 ft. Ice Saws. | 1-6 " " " 10 to 16 ft. " " |
| | 2 No. 78 Grapples and handles.
(Or 2 No. 81 Jack Grapples.) | 1-12 " No. 115 24-in. Boston Tongs. |
| | 1 No. 85 Sieve Shovel. | (Or 1-12 doz. No. 124 Drag Tongs.) |
| | (Or No. 86 Scoop Net is better.) | 2 No. 182 12-in. Upper Glns. |
| | | 2 No. 183 12-in. Lower Glns. |

Substitute "Perfection" Plow, if preferred; and add Nos. Y1, 52, 58, 88, 89, 122, 123, 163, 187, 187½, 190, 191, 195, 196, 200-209½ articles as needed.

SET No. 3.

Suitable for harvesting 2,000 to 5,000 tons of ice at moderate rate, using fifteen to twenty-five men, two or three horses, and incline elevator, filling four rooms at once.

If less rooms are filled at once, all tools can be reduced in number.

- | | | |
|----------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------|
| 1 No. 02 Enreka Elevator Plauer.
(Or No. 03 or No. 04 Plauer if much surface is to be removed.) | 1 No. 5 8-in. 8-tooth Plow. | 3 or 4 No. 82 Plow Ropes. |
| 1 No. Y1 Perfection Cultivator. | 1 No. 21 6-in. Hand Plow. | 2 No. 83 Elevator Forks. |
| 1 No. 1 4-in. Marker, 22-in. Sw. Gd.
(Or No. 1½ Marker, if two dimensions are to be cut.) | 2 No. 31 Splitting Forks. | 1 No. 83 Anger. |
| (Or No. 1 Marker, with 22-in. and 44-in. guides, if double or quadruple cakes are to be housed.) | 2 No. 31½ " " | 1 No. 89 Measure. |
| | 4 No. 41 Calking Bars. | 3 doz. No. 100 4½ (or 5 ft.) Ice Hooks. |
| | 4 No. 42 Bar Chisels. | 1½ " " " 6 ft. Ice Hooks. |
| | 4 No. 47½ Floor Shavers. | 1½ " " " 8 " " " |
| | 2 No. 49 Splitting Chisels. | 1½ " " " 10 to 16 ft. " " |
| | 2 No. 56 Needle Bars. | (No. 115 24-in. or No. 124 Drag Tongs, if wanted.) |
| | 2 No. 57 3-tined Needle Bars. | |
| | 4 No. 72 5 ft. Saws. | |

(Add 1 No. 2 or No. 3 Plow, if ice is thin.)

(Add 1 No. 8 10-in. Plow, if ice is 15 inches thick; or 1 No. 9 12-in. Plow, if ice is 18 to 20 inches thick.)

Substitute "Perfection" Marker and Plows, if preferred, and add Nos. 52, 58, 88, 89, 122, 123, 168, 187, 187½, 190, 191, 195, 196, 200-209½, as needed.

SET No. 4.

Suitable for harvesting 20,000 tons from one ice field at ordinary rate, using seventy-five men, six or eight horses (not counting horses needed for scraping snow), and incline elevator, filling eight rooms at once. For filling a larger number of rooms at once, add the necessary tools to handle them.

- | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| 1 No. 02, 03, or 04 Enreka Elevator Plauer. | 1 No. 21 6-in. Hand Plow. | 8 No. 82 Plow Ropes. |
| 1 No. Y1 Perfection Cultivator. | 3 No. 31 Splitting Forks. | 2 No. 83 Elevator Forks. |
| 1 No. 1 4-in. Marker, 22-in. Sw. Gd. | 2 No. 31½ " " | 2 No. 85 Sieve Shovels. |
| 1 No. 1 " " 32-in. or 44-in. Swing Guide.
(Or have both with Extension Guides if preferred.)
(If 44-inch cakes are to be cut, Ext'n Guides cannot be used.) | 1 No. 32 Lynn Bar. | 2 No. 86 Scoop Nets. |
| | 8 No. 42 Calking Bars. | 1 No. 88 Ice Anger. |
| | 8 No. 42 Bar Chisels. | 1 No. 89 Measure. |
| | 8 No. 47½ Floor Shavers.
(These will not be needed if all cakes are placed on elevator to one even thickness.) | 5 doz. No. 100 4½ (or 5 ft.) Ice Hooks. |
| 2 No. 2 6-in. 8-tooth Plows. | 4 No. 49 Splitting Chisels. | 1½ " " " 6 ft. Ice Hooks. |
| 2 No. 5 8-in. " " | 2 No. 56 Needle Bars. | 1½ " " " 8 " " " |
| 1 No. 8 10-in. " " | 4 No. 57 3-tined Needle Bars. | 1½ " " " 10 to 12 ft. " " |
| 1 No. 9 12-in. " " " If thick ice. | 6 No. 72 5 ft. Saws. | 1½ " " " 14 to 16 " " " |
| | | (One pair of No. 121 Drag Tongs in each room, if custom requires.) |

Substitute "Perfection" Markers and Plows, if preferred, and add Nos. 52, 58, 122, 123, 168, 187, 187½, 190, 191, 195, 196, 200-209½, as needed.

Rate of speed and number of rooms to fill simultaneously largely govern number of tools required. Rapid harvesting is the most profitable, as changes in weather and heavy snows may be avoided. In storing ice, leave three inches space around cakes, and pack so as to "tie" the tiers. The amount of good ice you can get out is what counts, not what can be crammed in.

Our pamphlet on Ice Harvesting will be mailed with pleasure to any applicant.

Numbers.	Names of Tools.	Code Words.	Prices.
47½.	Floor Shavers, 5 teeth	CLIFF,	each, \$3.00
48.	Knob Handle Splitting Chisels, steeled blade	CLOSET,	" 2.25
48½.	" " " " solid tool-steel blade,	CLOTURE,	" 2.50
49.	Ring Handle " " steeled blade	CLUTCH,	" 2.50
49½.	" " " " solid tool-steel blade,	CLUTID,	" 2.75
50.	Knob Handle Saw-Tooth " " " " " "	CLYDAL,	" 2.75
51.	Ring " " " " " " " "	CLYDE,	" 3.00
52.	Punching Bars, solid tool-steel blade	CLYSTER,	" 2.25
56.	Ring Needle Bars, all steel	COACH,	" 2.00
57.	Three-Tined Needle Bars, tool-steel tines	COAST,	" 4.50
58.	No. 1 Canal Chisels, solid tool-steel blade	COKE,	" 2.75
59.	No. 2 " " wood handle	COFFER,	" 2.50
60.	Hook Chisels	COMET,	" 3.00
62.	Knob Hdle. Separating Chisels, solid tool-steel blade,	COMPASS,	" 2.75
63.	Ring " " " " " " " "	COMRADE,	" 3.00
64.	Double Cake Bars	CRITIC,	" 2.50
68.	Ice Adzes, handled	CUTLASS,	" 4.00
70.	Ice Saws, 4 feet, <i>best quality, with case</i>	FARMER,	" 5.00
71.	" " 4½ " " " " " "	FEAST,	" 5.25
72.	" " 5 " " " " " "	FERN,	" 5.50
74.	" " 4 " " " " <i>without case</i>	FLAG,	" 4.50
75.	" " 4½ " " " " " "	FULTON,	" 4.75
76.	" " 5 " " " " " "	FUROR,	" 5.00
78.	Pole Grapples, with handle	GALLON,	" 4.25
79.	" " without handle	GAMBOI,	" 3.75
80.	Handle and Shackle for pole grapple	GENOA,	" —
81.	Jack Grapples	GEM,	" 4.25
82.	Plow Ropes	GLOBE,	" 1.50
83.	Elevator Forks	GREEK,	" 1.50
85.	Sieve Shovels, 40 in. handle	GROVE,	" 1.75
86.	Scoop Nets	GULF,	" 3.00
88.	Ice Augers, 1½ in.	GUMBO,	" 3.50
89.	Measuring Irons	GURNET,	" .50
89½.	Ice Tool Grapples	GUSSET,	" 3.00
90.	Line Markers	GUSTO,	" .90
100.	Ice Hooks, 3 feet, ash handle	HACK,	per doz., 9.00
	" " 3½ " " " "	HALL,	" 9.00
	" " 4 " " " "	HALYARD,	" 9.25
	" " 4½ " " " "	HAMLET,	" 9.50
	" " 5 " " " "	HAROLD,	" 10.00
	" " 6 " " " "	HATTER,	" 10.50
	" " 7 " " " "	HAWK,	" 11.00
	" " 8 " " " "	HEBRON,	" 12.00
	" " 10 " " " "	HECTOR,	" 13.00
	" " 12 " " " "	HEMLOCK,	" 14.00
	" " 14 " " " "	HICKORY,	" 15.50
	" " 16 " " " "	HISTORY,	" 17.00
	" " 18 " " " "	HOBSON,	" 18.50
102.	Car Ice Hooks, 4 feet, ash handle	HOME,	" 12.00
104.	Cant " " 4 " " " "	HOOKEE,	" 16.00
105.	" " " " unattached	HOPPER,	" 6.00
107.	Pullers for ice hooks	HOTEL,	" 4.50
108.	Shovers " " " "	POVER,	" 2.75
109.	Rings " " " "	HUNGER,	" .35
110.	Rivets " " " "	HYPER,	" .03
115.	Boston Tongs, regular, 13 in. span (family), <i>red</i> ,	MACHINE,	" 14.00
	" " " " 14½ " " (small), "	MADRID,	" 15.00
	" " " " 16½ " " (medium), "	MAGIE,	" 16.00
	" " " " 24 " " (loading), "	MAMMOTH,	" 18.00
	" " " " 26 " " (extra size), "	MAMONO,	" 19.00

Numbers.	Names of Tools.	Code Words.	Prices.
115½.	Standard Hollow Handle Tongs, 13 in. span, <i>blue</i> ,	MANACLE, per doz.,	\$16.00
"	" " " " 14½ " " " "	MANAGER, "	17.00
"	" " " " 16½ " " " "	MANAKIN, "	18.00
116.	Extra " " " " 13 " " " <i>black</i> ,	MANDREL, "	19.00
"	" " " " 14½ " " " "	MANHOOD, "	20.00
"	" " " " 16½ " " " "	MARBLE, "	21.00
117.	Wood Handle Tongs, 14½ in., <i>black</i>	MECHANIC, "	24.00
"	" " " " 16½ " " " "	MEDAL, "	24.00
118.	New York Tongs, 14½ in. span (family), <i>red</i> . .	MEDIA, "	14.00
"	" " " " 17 " " (small), "	MEDLAR, "	15.00
"	" " " " 20 " " (medium), "	MEEKER, "	16.00
"	" " " " 24 " " (large), "	MEGRIM, "	18.00
119.	Philadelphia Steel Tongs, 14 in. span (small), <i>black</i> ,	MELON, "	17.00
"	" " " " 17 " " (medium), "	MEMORY, "	20.00
"	" " " " 23 " " (large), "	MENTAL, "	23.00
120.	Chain Tongs, 10 in. span, Cincinnati pattern, "	MITTEN, "	12.00
"	" " 12 " " " " " " " "	MODEL, "	12.50
"	" " 15 " " " " " " " "	MODERN, "	13.00
131.	Patent Link Cincinnati Tongs, 10 in., <i>black</i> . .	MODEST, "	12.00
"	" " " " 12 " " " " " " " "	MOHAIR, "	12.50
"	" " " " 15 " " " " " " " "	MOISTURE, "	13.00
121½.	Buffalo Tongs, 12 in. span, <i>black</i>	MOLAND, "	15.00
121½.	" " 12 " " polished	MOLKST, "	20.00
122.	Eastern Edging-Up Tongs, solid handles, 25 in. span,	MOMENT, "	18.00
123.	Utah " " " hollow " 19 " " " "	MONAD, "	20.00
124.	Drag, or Stowing Tongs, solid handles	MOODY, "	21.00
125.	" " " " " hollow " " " " " "	MORTAL, "	23.00
130.	Single Point Lowering Tongs, 24 in. span	MOTIVE, each,	2.00
130½.	" " " " 17 " " " " " " " "	MOTOR, "	2.00
131.	Double " " " " 24 " " " " " " " "	MUFFIN, "	2.75
131½.	" " " " " " 17 " " " " " " " "	MUFFORT, "	2.75
132.	Single Point Market Tongs, 24 " " " " " "	MULE, "	3.00
133.	Double " " " " 24 " " " " " " " "	MUMMY, "	3.75
135.	Adjustable Claw Hoisting Tongs, 24 in. span . .	MUSIC, "	6.00
137.	Solid " " " " 24 " " " " " " " "	MUSTARD, "	4.50
140.	Tapping Axes	NAHANT, per doz.,	24.00
141.	House Axes, 6½ in. blade	NATION, "	36.00
142.	Boston Ice Axes, 8 x 1½ in. square blade . .	NEEDED, "	20.00
144.	Chicago " " " 8 x 2½ " round "	NEST, "	20.00
145.	" " " " " 8 x 3 " " " " " " " "	NEUTRAL, "	20.00
146.	New York " " " 7½ x 3 " square " " . .	NEWPORT, "	20.00
147.	" " " " " heavy, 7½ x 3½ in. square blade,	NEWTOWNE, "	21.00
148.	Philadelphia Ice Axes, 3 in. round blade . .	NIPPERS, "	20.00
150.	No. 1 Southern " " 2½ " " " " " "	NORFOLK, "	18 00
151.	No. 2 " " " 2½ " square " " " " "	NORWAY, "	16 00
151½.	No. 2½ " " " 2½ " round " " " " "	NOSTREL, "	16.00
152.	No. 3 " " " 2 " square " " " " "	NOSTRUM, "	15.00
155.	Splitting Awls, needle point, round handle . .	NURSERY, "	2.00
155½.	" " " " " brass " " " " " "	NURSING, "	10.00
156.	" " " " " chisel " " " " " "	NUSTLAR, "	2.00
157.	Ice Chippers	NUTMEG, "	8.00
159.	Wood-Handle Hand Saws, 30 in.	PANNEL, each,	1.25
159½.	Oval Iron " " 30 " " " " " " " "	PANTRY, "	1.25
158½.	Guard " " " " 30 " " " " " " " "	PANDOL, "	1.50
159½.	Ice Cleavers	PAPUS, "	2.50
160.	Long Handle 4-Point Ice Shavers, large blade .	PARTNER, "	2.25
160½.	" " " " " " small " " " " " "	PARTRIDGE, "	2.25
161.	D " " " " " large " " " " " "	PASSION, "	2.25
161½.	" " " " " " small " " " " " "	PASTIME, "	2.25
164.	Long Handle 5-Point Ice Shavers	PASTOR, "	2.50
164½.	" " " " Michigan Shavers	PASTEL, "	2.75
164½.	D " " " Ice Shavers	PASTRY, "	2.50
164½.	" " " " Michigan Shavers	PASTITH, "	2.75
164½.	Fine Tooth Slashers, knob handle	PATIOS, "	2.50

Numbers.	Names of Tools.	Code Words.	Prices.
162.	Long Handle Ice Breakers	PAUL,	each, \$3.50
163.	D " " "	PAWNEE,	" 3.50
163½.	Pocket Ice Aprons, with harness	PANILLA,	" 2.25
165.	House Runs, 6 feet	PEKIN,	" 9.00
166.	Car Runs, 7 feet	PENNY,	" 12.50
168.	Ice Run Iron, drilled, 10 feet	PERIOD,	} per foot, .06
	" " " " 12 "	PIANO,	
	" " " " 14 " (usual length)	PICNIC,	
	" " " " 15 "	PILLAR,	
	" " " " 16 "	PILOT,	
168½.	Half-Oval Iron, 1 x $\frac{3}{8}$ in., drilled, 12 ft. lengths	PIMPLE,	" .06
	" " " " 1 x $\frac{3}{8}$ " " 14 " "	PINCERS,	" .06
169.	Crescent Ice Saws, 6½ ft. x 2 ft.	PINK,	each, 18.00
170.	"Ironclad" Ice Scales, 200 lbs. by 5 lbs.	SABLE,	" 2.50
	" " " " 300 " by 5 "	SAFETY,	" 3.00
	" " " " 400 " by 5 "	SALAD,	" 3.50
170½.	"Telescope" Ice Scales, 200 " by 5 "	SALAGAT,	" 3.00
	" " " " 300 " by 5 "	SALAGOS,	" 3.25
	" " " " 400 " by 5 "	SALAGUL,	" 3.50
171.	"Duplex" Ice Scales, 200 " by 5 "	SALAMBA,	" 3.00
	" " " " 300 " by 5 "	SALAMIS,	" 3.25
	" " " " 400 " by 5 "	SALANIO,	" 3.50
	" " " " 200 " by 2 "	SALANKE,	" 3.50
172.	"Straight" Ice Scales, 80 " by 1 "	SALARY,	" 1.50
	" " " " 100 " by 1 "	SALEM,	" 2.25
	" " " " 125 " by 1 "	SALVAOE,	" 2.75
	" " " " 150 " by 1 "	SAMBO,	" 3.50
	" " " " 200 " by 2 "	SANDAL,	" 4.00
	" " " " 250 " by 2 "	SANFORD,	" 4.50
173.	"Tubular" Ice Scales, 200 " by 2 "	SCOTH,	" 8.00
	" " " " 300 " by 2 "	SCUTTLE,	" 9.00
174.	"Mogul" Ice Scales, 200 " by 5 "	SCARF,	" 4.00
	" " " " 300 " by 5 "	SCARLET,	" 4.00
	" " " " 400 " by 10 "	SCHOON,	" 4.00
180.	"Steel King" Ice Scales, 200 " by 2 "	SEEDER,	" 3.25
	" " " " 300 " by 5 "	SEGMENT,	" 3.50
	" " " " 400 " by 5 "	SELVAGE,	" 4.00
182.	Upper Self-Lubricating Gins, 8 in.	SEXTON,	" 4.50
	" " " " 10 "	SHADOW,	" 5.25
	" " " " 12 "	SHANK,	" 6.75
	" " " " 14 "	SHAWNEE,	" 8.00
	" " " " 16 "	SHOAL,	" 9.50
183.	Lower Self-Lubricating Gins, 8 "	SIGNET,	" 5.25
	" " " " 10 "	SIMON,	" 6.00
	" " " " 12 "	SIMON,	" 7.50
	" " " " 14 "	SLAB,	" 8.75
	" " " " 16 "	SLATE,	" 10.25
186.	Anti-Friction Sheave Wheels, 12 "	SLATTERN,	" 1.50
187.	4-Slat T-Iron Skids, 8 feet long, 70 lbs.	PENSILE,	" 7.00
	" " " " 10 " " 88 "	PENSION,	" 7.50
	" " " " 12 " " 100 "	PEPPER,	" 8.00
187½.	3-Slat " " " 8 " " 52 "	PEPTIC,	" 6.00
	" " " " 10 " " 65 "	PERALT,	" 6.50
	" " " " 12 " " 75 "	PERCH,	" 7.00
190.	Wooden Runs, with sides, 10 feet	SLEDGE,	" 8.50
	" " " " 12 "	SLEEKER,	" 10.25
	" " " " 14 "	SLEKPEL,	" 11.75
	" " " " 16 "	SLEETY,	" 13.50
190½.	Hooks and Eyes for No. 190 runs	SLEEVE,	per pair, .40
191.	Wooden Flat Skids, 12 feet	SLIDIST,	each, 5.50
	" " " " 14 "	SLIPOND,	" 6.50
	" " " " 16 "	SLIVER,	" 7.25
195.	Grooving Harnesses	SLOPANT,	" 12.50

Numbers.	Names of Tools.	Code Words.	Prices.
196.	Hames, No. 10 size	SLOPST, per pair,	\$2.50
199.	Creasey Ice Breakers:—		
	No. 4 size, takes cake 4 x 4 in. x any length,	LACONIA, each,	6.00
	No. 3 " " " 5 x 6 " x " " "	KENLY, " "	10.00
	No. 58 " " " 6 x 8 " x " " "	NAILSMITH, " "	14.00
	No. 57 " " " 8 x 8 " x " " "	MERIDIAN, " "	20.00
	No. 56 " " " 8 x 10 " x " " "	JAVELIN, " "	28.00
	No. 55 " " " 10 x 10 " x " " "	HEADSTRONG, " "	37.50
	No. 54 " " " 10 x 12 " x " " "	FAITHFUL, " "	54.00
	No. 53 " " " 12 x 14 " x " " "	ELEPHANT, " "	67.50
	No. 52P " " " 14 x 14 " x " " "	DAMASK, " "	73.00
	No. 52 " " " 14 x 14 " x " " "	CALDRON, " "	81.00
	No. 51 " " " 14 x 18 " x " " "	BALLOON, " "	96.00
	No. 50 " " " 14 x 28 " x " " "	ACORN, " "	112.50
200.	Scoop Scrapers, 3 feet wide (old style)	SOLID, " "	11.00
201.	Clearing-off Scrapers, 6 feet long	SPERM, " "	9.00
202.	" " 7 " " " " " " " " " "	SPIDER, " "	9.25
203.	" " 8 " " " " " " " " " "	SPINDLE, " "	9.50
	Shafts for either scoop or clearing-off scrapers	SPOON, " "	6.00
205.	Boston Scrapers, 6 feet long (no shafts)	SQUARE, " "	11.00
206.	" " 8 " " " " " " " " " "	SQUIRREL, " "	12.00
207.	Ropes for 6 ft. Boston Scrapers	STAGGER, " "	2.25
208.	" " 8 " " " " " " " " " "	STAGNATE, " "	2.25
209.	Chains " 6 " " " " " " " " " "	STAMEN, " "	2.00
209½.	" " 8 " " " " " " " " " "	STAMINA, " "	2.25
210.	Patent Clearing Teeth for plows, 8 in.)	WALRUS, " "	4.00
	" " " " " " 9 ")	WEB, " "	4.50
	" " " " " " 10 ") (Inserted, WEDGE, " "		5.00
	" " " " " " 12 ") see page 6), WINDOW, " "		6.00
	" " " " " " 14 ")	WOLF, " "	7.00
<i>Straightening and filing included in above prices, when plows to have clearing teeth inserted are sent to factory.</i>			
220.	Cases for plows, well ironed, painted, and strapped, marker to 7 in., inclusive	YAM, " "	1.25
	Cases for plows, 8 in. to 12 in., inclusive	YELLOW, " "	1.50

All new plows are provided with cases without extra charge.

SECOND-HAND ICE TOOLS.

Persons desiring to purchase second-hand markers, plain and swing-guide plows, planes, and other tools, should write to us early, and we will notify such ones as soon as tools answering their requirements come in. We receive many in exchange during the fall repairing season, and excellent bargains can often be had.

A list of what we have on hand will be sent at any time upon application.

WM. T. WOOD & CO., Arlington, Mass.



